

Sewers, Clean Water, and Planned Growth: Restructuring the Federal Pollution Abatement Effort

The village [of Walton, N.Y.] has never been in debt before. It is in debt now. The pipe is being laid in trenches along every peaceful street. In front of each house the word "sewer" has been written in iridescent paint on the old slate sidewalk where the connecting line will go. . . .

In the Western Auto store . . . owner Charles Fiumera says the sewers are a federal "gift" that Walton could have done without. "We needed a sewer system. . . . We didn't need the one we got."¹

The Federal Water Pollution Control Act Amendments of 1972 (1972 FWPCA)² were described in Congress as the "biggest, strongest, and toughest water pollution bill"³—"one of the most significant bills of all time."⁴ Title II of the 1972 FWPCA promises communities lavish financial assistance for the construction of waste treatment facilities.⁵ The Title thus reflects the federal government's commitment to undertake a massive clean-up of the Nation's waters.⁶

In localities like Walton, New York, however, where the clean-up is actually taking place, Title II may be viewed with ambivalence. On the credit side of the local balance sheet, Title II funds may be a boon to hard-pressed municipal governments, which have lagged in the national effort to abate water pollution.⁷ On the debit side of the municipal ledger, Title II may represent more than an increased debt

1. Wall St. J., July 26, 1976, at I, col. 1.

2. 33 U.S.C. §§ 1251-1376 (Supp. V 1975). Described by the Act's official title as "amendments," the 1972 FWPCA in fact substitutes its provisions for the pre-1972 Federal Water Pollution Control Act, *id.* §§ 1151-1175 (1970).

3. 118 CONG. REC. 10239 (1972) (Rep. Harrington).

4. *Id.* at 10768 (Rep. Gubser).

5. See 33 U.S.C. §§ 1281(g), 1287 (Supp. V 1975). Title II, *id.* §§ 1281-1292, provides financial assistance for two key programs: the construction of publicly owned treatment works and the management and planning of arcawide waste treatment. See generally Phillips, *Developments in Water Quality and Land Use Planning: Problems in the Application of the Federal Water Pollution Control Act Amendments of 1972*, 10 URB. L. ANN. 43, 47-56, 83-92 (1975).

6. See 33 U.S.C. § 1251(a) (Supp. V 1975) (objective of 1972 FWPCA is to restore and maintain integrity of Nation's waters).

7. S. REP. NO. 414, 92d Cong., 1st Sess. 5-6, 34-35 (1971), reprinted in [1971] U.S. CODE CONG. & AD. NEWS 3668, 3672-73, 3701 (construction "backlog" for municipal waste treatment facilities was \$33-\$37 billion in 1971).

burden to meet the local share of construction costs or the temporary disruption of peaceful neighborhoods: the sewers financed by Title II could foster poorly planned and environmentally unsound growth patterns.

The mixed blessing bestowed by the 1972 FWPCA may partially account for the apparent reluctance of many localities to embrace the sewer construction grants proffered by Title II. With the Act's first pollution abatement deadline only months away, half of the Nation's municipalities are not expected to be in compliance.⁸ In the 95th Congress, legislation has been introduced that would authorize the Environmental Protection Agency (EPA) to postpone the deadline on a case-by-case basis.⁹

If the Act is to be amended, not only its deadlines but also its impact on the development patterns of localities should be reconsidered. This Note proposes that the construction grants program be restructured to fund directly regional councils with qualified water pollution abatement programs. The design of waste treatment systems should be governed by the growth plans of these regional agencies insofar as the plans are consistent with the Act's pollution abatement objective. The Note argues that the shift of prime responsibility for abatement to regional planners will harmonize the potentially conflicting goals of clean water and planned growth.

I. Sewers and Land Development

The goal of the 1972 FWPCA is to eliminate the discharge of pollutants into the Nation's waters by 1985.¹⁰ Attaining this goal will

8. Wall St. J., Oct. 13, 1976, at 1, col. 6. Industry, however, has done significantly better, with an expected compliance rate of 90%. *Id.*

9. H.R. 3199, 95th Cong., 1st Sess. § 13 (1977). The bill passed the House and awaits Senate action. Wall St. J., Apr. 6, 1977, at 3, col. 1. A similar bill was introduced in the 94th Congress. H.R. 9560, 94th Cong., 1st Sess. § 9 (1975), reprinted in *To Amend the Federal Water Pollution Control Act: Hearings on H.R. 9560 Before the Subcomm. on Water Resources of the House Comm. on Public Works and Transportation*, 94th Cong., 1st Sess. 9-10 (1975) [hereinafter cited as *1975 Hearings*].

10. 33 U.S.C. § 1251(a)(1) (Supp. V 1975). An interim goal of the Act is to achieve wherever attainable "water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water" ("fishable and swimmable") by July 1, 1983. *See id.* § 1251(a)(2). In 1976 a report by the National Commission on Water Quality, an organization created by the 1972 FWPCA, concluded that the 1985 goal is unlikely to be met. It recommended that the goal of fishable and swimmable waters be retained but that the 1985 pollutant discharge goal be restated to stress conservation and recycling of water resources consistent with the 1972 FWPCA's overall objective to restore and maintain the integrity of the Nation's waters. *See Final Recommendations to Be Sent to Congress by National Commission on Water*

require abatement of a major source of water pollution: the wastewaters generated locally in homes, schools, and businesses.¹¹ Typically, these municipal wastes are transported from their sources by underground pipelines, or "interceptor sewers,"¹² to be treated at centrally located sewage treatment plants (STPs)¹³ and then discharged into nearby rivers, lakes, or oceans.

To aid in the elimination of municipal pollution, Congress enacted Title II of the 1972 FWPCA.¹⁴ The Title authorizes the EPA to spend \$18 billion over three years to assist municipalities in upgrading existing waste treatment systems and constructing new STPs and in-

Quality on Amending Federal Water Pollution Control Act, 6 ENVIR. REP. (BNA) 1890, 1891 (1976) [hereinafter cited as *Final Recommendations*].

The Act's goals appear to have no legal consequence. See Comment, *Areawide Planning Under the Federal Water Pollution Control Act Amendments of 1972: Intergovernmental and Land Use Implications*, 54 TEX. L. REV. 1047, 1049-50 (1976). However, the Act does establish enforceable deadlines for the achievement of "effluent limitations"—restrictions on the amount of pollutants per unit of discharge. By July 1, 1977, publicly owned treatment works must achieve effluent limitations based on "secondary treatment," 33 U.S.C. § 1311(b)(1)(B) (Supp. V 1975), a biological treatment process defined in 40 C.F.R. § 133.102 (1976). By July 1, 1983, they must apply the "best practicable waste treatment technology," as defined by the Administrator. 33 U.S.C. §§ 1311(b)(2)(B), 1281(g)(2)(A) (Supp. V 1975). The National Commission on Water Quality also recommended that the 1977 deadline be postponed on a case-by-case basis and that the 1983 deadline be pushed back by five to ten years. See *Final Recommendations*, *supra*, at 1890.

11. In 1975 the National Commission on Water Quality estimated that construction of the municipal treatment facilities needed to meet the Act's 1983 effluent limitations would require a capital investment of \$105.6 billion, based in part on population projections to 1990. See 6 ENVIR. REP. (BNA) 302 (1975). The EPA made a similar estimate, *id.*, but has recently lowered the projected cost to \$95.9 billion, 7 *id.* at 1592-93 (1977). Elimination of all municipal pollutant discharges as required by the 1972 FWPCA could cost \$444 billion. A substantial portion of this amount is needed for construction of local storm sewers. *Environmental Protection Agency Transition Papers to Incoming Carter Administration on Areas of Agency Jurisdiction*, *id.* at 1288, 1288 [hereinafter cited as *Transition Papers*].

12. An interceptor is a sewer whose primary purpose is to transport wastewaters from collector sewers to a treatment facility. 40 C.F.R. § 35.905-12 (1976). A collector sewer carries wastewaters from individual pollution sources to an interceptor. See *id.* § 35.905-19.

13. The 1972 FWPCA does not explicitly refer to STPs. Title II of the Act broadly defines "'treatment works'" to include "any devices and systems used in the storage, treatment, recycling, and reclamation of municipal sewage . . . , including . . . sewers, . . . collection systems . . . , and other equipment" as well as "any other method or system for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste." 33 U.S.C. § 1292(2)(A), (B) (Supp. V 1975). California law defines an STP as that portion of a treatment works actually used in the treatment or reclamation of wastewaters. Clean Water Grant Program Regulations, 23 CAL. ADMIN. CODE § 2102(kk) (1975).

14. 33 U.S.C. §§ 1281-1292 (Supp. V 1975). See S. REP. NO. 414, 92d Cong., 1st Sess. 5-6, 34-35 (1971), *reprinted in* [1971] U.S. CODE CONG. & AD. NEWS 3668, 3672-73, 3701 (inadequate financial assistance to states and localities for construction of STPs created critical backlog of needed waste treatment projects; Title II's appropriation designed to reduce backlog).

terceptors.¹⁵ Though at first Title II funds were partially impounded and few construction grants were made, the original authorization must now be fully allocated by September 30, 1977.¹⁶

Despite some local resistance,¹⁷ it is likely that many municipalities having water quality problems will apply for construction grants. The availability of generous federal assistance alone may tempt some municipalities to seek aid.¹⁸ More importantly, municipalities may discover that the construction, expansion, or upgrading of their waste treatment systems is imperative: the 1972 FWPCA requires publicly owned treatment works to comply with specific pollution abatement deadlines¹⁹ and threatens substantial penalties if the deadlines are not met.²⁰ That Title II is stimulating such local investment is already

15. See 33 U.S.C. § 1287 (Supp. V 1975). An additional \$480 million was appropriated by Congress in late 1976. *Transition Papers*, *supra* note 11, at 1309.

16. 5 ENVIR. REP. (BNA) 1679 (1975).

17. See Wall St. J., Oct. 13, 1976, at 1, col. 6.

18. See 1 DEP'T OF COMMUNITY AFFAIRS, STATE OF NEW JERSEY, SECONDARY IMPACT OF REGIONAL SEWERAGE SYSTEMS 7 (1975) [hereinafter cited as SECONDARY IMPACT] (federal sewer construction programs, such as 1972 FWPCA, are viewed by local officials as "windfall, one shot" opportunities from which as much aid as possible should be obtained); cf. Altshuler & Curry, *The Changing Environment of Urban Development Policy—Shared Power or Shared Impotence?*, 10 URB. L. ANN. 3, 38 (1975) (interstate highway program's 90% matching formula provided overwhelming temptation for local officials).

The federal share of construction costs is 75%. 33 U.S.C. § 1282(a) (Supp. V 1975). In at least 30 states the remaining cost is divided between the state and local governments. See Wall St. J., Oct. 13, 1976, at 1, col. 6. For example, the local share of construction costs is 10% in New Jersey and Vermont. SECONDARY IMPACT, *supra* at 31; VT. STAT. ANN. tit. 10, § 1625(a) (Supp. 1976). See 1975 *Hearings*, *supra* note 9, at 26-27, for a breakdown of state funds applied to treatment works projects eligible for Title II construction grants.

19. See 33 U.S.C. § 1311(b) (Supp. V 1975); note 10 *supra*.

20. See 33 U.S.C. § 1319(d) (Supp. V 1975). The 1972 FWPCA makes the discharge of any pollutant by any person unlawful. *Id.* § 1311(a). "Person" includes municipalities. *Id.* § 1362(5). Any person can be excepted from this requirement if the EPA Administrator or a state water pollution control program issues a temporary pollutant discharge permit. Such permits include a schedule of compliance designed to achieve effluent limitations that implement the Act's water quality improvement objective by July 1, 1977 and July 1, 1983. *Id.* § 1342(a), (b); note 10 *supra*.

Under the 1972 FWPCA, actions to enforce pollution abatement deadlines may be brought by the EPA or by private citizens. See 33 U.S.C. §§ 1319(b), 1365(a)(1), (f) (Supp. V 1975). The agency has begun to redirect its traditionally industry-oriented enforcement effort toward checking violations of effluent limitations by municipal polluters. See Wall St. J., Oct. 13, 1976, at 1, col. 6. In an action by the EPA against the city of Camden, New Jersey, the agency obtained an order requiring the city to repair, restore, and maintain two STPs. 7 ENVIR. REP. (BNA) 535 (1976). Moreover, a district court held last year that insufficient funding of the construction grants program does not exempt municipalities from the 1972 FWPCA's deadlines. *State Water Control Bd. v. Train*, 8 Envir. Rep. Cas. 1609 (E.D. Va. 1976), *appeal docketed*, No. 76-1320 (4th Cir. Mar. 19, 1976).

Enforcement actions against municipalities might also be brought by state governments. When state water pollution control programs have been approved by the EPA Administrator, states may issue permits that allow polluters to continue making discharges.

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evident; the EPA reported that 7,600 projects were underway as of January 1, 1977.²¹

A. Growth Impacts

Under the 1972 FWPCA, responsibility for sewer design is entrusted to the construction grant applicant—typically a local government or a special agency established to provide sewer services.²² Local applicants are eligible for preliminary grants that fund the preparation of “facilities plans”; it is at this stage of the construction grants process that decisions concerning the size and location of sewer systems are made.²³

The grant applicant does not have complete discretion in designing its sewerage system. To be eligible for a construction grant, treatment works projects must be designed according to statutory requirements. Before a locality can receive federal assistance, facilities plans are reviewed by the EPA for conformity with Title II's provisions.²⁴ Most importantly, the EPA Administrator must determine that

See 33 U.S.C. § 1342(b) (Supp. V 1975). States having such qualified water pollution control programs share with the Administrator responsibility for enforcement of the Act. *Id.* § 1319(a). The specter of state enforcement is real. Under the pre-1972 FWPCA, the town of Woodstock, Vermont, refused to undertake necessary treatment works construction until it was successfully sued by the state. In 1976, when the town of Windsor, Vermont, rejected a bond issue to pay its 10% share of a \$900,000 sewer extension project, state officials reminded Windsor of Woodstock's experience and warned that if the pollution problem were not corrected by the town or by the individual polluters, the state could levy a daily fine. Rutland (Vt.) Daily Herald, May 14, 1976, at 9, col. 1.

21. Twenty-three hundred construction grants have been awarded, 4,300 are in the initial planning stage, and another 1,000 are under study. *Transition Papers*, *supra* note 11, at 1309.

22. See 33 U.S.C. § 1281(g)(1) (Supp. V 1975); 40 C.F.R. §§ 35.920-1, .920-3 (1976).

23. See 40 C.F.R. § 35.917-1 (1976); Municipal Constr. Div., Office of Water Program Operations, EPA, Guidance for Preparing a Facility Plan 5-17 (May 1975) [hereinafter cited as Guidance].

24. See 33 U.S.C. § 1284(a)(5) (Supp. V 1975); 40 C.F.R. § 35.903(f) (1976); Guidance, *supra* note 23, at 31-32.

Under the 1972 FWPCA, the EPA Administrator is responsible for determining that treatment works applications for construction grant assistance meet Title II requirements. See 33 U.S.C. §§ 1281(g)(2), (3), 1283(a), 1284(a), (b)(1), (b)(3), 1292(2)(B) (Supp. V 1975). In the 95th Congress legislation has been introduced, and passed by the House, that would authorize state water pollution control agencies to certify to the Administrator that a project is consistent with Title II's requirements. See H.R. 3199, 95th Cong., 1st Sess. § 12 (1977). However, the proposed amendment would not alter Title II's requirements for treatment works design, nor the authority of the EPA to deny funding to a project that does not meet the requirements. See *id.*

An obvious threshold eligibility requirement for construction grant assistance is that there be some need for waste treatment facilities. See 33 U.S.C. § 1284(a)(5) (Supp. V 1975) (before awarding construction grant EPA Administrator must determine that size of treatment works projects relates directly to needs to be served). If no need is demonstrated, the EPA will refuse to fund treatment works projects. See, e.g., EPA Region X, Final Environmental Impact Statement, Wastewater Treatment Systems for the Bay to

a proposed treatment works project will have "sufficient reserve capacity": STPs and interceptor sewers must be built large enough to accommodate the increase in the volume of wastewater that a growing community will generate over a number of years.²⁵ Two principal considerations enter into the calculation of reserve capacity: "design year" and population projections. The design year is the year in which the next round of treatment works construction is planned to occur.²⁶ Population increases are projected on the basis of past trends and the amount of growth permitted by local land-use ordinances.²⁷

Bay Sanitary District, Lincoln County, Oregon, at i (July 22, 1976) [hereinafter cited as Bay to Bay EIS] (recommending that "no action" be taken on proposed treatment works project "until such time as development warrants construction of a sewerage system"); EPA Region X, Final Environmental Impact Statement, Wastewater Treatment Systems for the Southwest Lincoln County [Oregon] Sanitary District, at i (July 22, 1976) [hereinafter cited as Lincoln County EIS] (recommending that decision to provide sewer service be delayed pending sanitary survey of area because EPA was "unable to identify significant wastewater problems to warrant" sewer construction).

25. See 33 U.S.C. § 1284(a)(5) (Supp. V 1975). Under the Act, projects have adequate reserve capacity to accommodate future needs if the cost of immediate construction of such capacity is less than the cost of building additional facilities in the future. See *id.*

26. See generally 1 Urban Systems Research & Engineering, Inc., Interceptor Sewers and Suburban Sprawl: The Impact of Construction Grants on Residential Land Use 150-53 (1974) [hereinafter cited as Interceptor Sewers]. In the past the design year was based on the life expectancy of treatment works equipment. See 40 Fed. Reg. 23107, 23108-09 (1975); 1 Interceptor Sewers, *supra* at 54; Interview with Merwin Hupfer, Ass't Director of Water Compliance & Hazardous Substances Unit, Conn. Dep't of Environmental Protection, in Hartford, Conn. (June 9, 1976) (notes on file with *Yale Law Journal*). The present trend is towards shorter design periods. See pp. 739-40 & note 30 *infra*.

27. For example, in Chester County, Pennsylvania, an STP and an interceptor sewer system with a design year of 1985 were planned to have reserve capacity to accommodate the present population of 37,500 as well as an expected population increase of 19,500. See EPA Region III, Final Environmental Impact Statement, Valley Forge Area Wastewater Treatment Facility, Chester County, Pennsylvania, at III-23 (Sept. 1974) [hereinafter cited as Valley Forge EIS].

The bases for estimating future STP capacity are the growth rate of the population to be served and its per-capita sewage flow. EPA Region III, Draft Environmental Impact Statement, Upgrading and Expansion of the Falling Creek Wastewater Treatment Facility, Chesterfield County, Virginia 17 (July 28, 1975) [hereinafter cited as Falling Creek EIS]. Accordingly, to plan a project's design capacity, the first step is to project a region's population growth. See, e.g., *id.* at 19-20; Valley Forge EIS, *supra* at III-23, III-29. Such projections involve the analysis of statistical information on present and past population trends; they typically take "the form of asking what would happen if the observed rates were to continue." N. KEYFITZ & W. FLIEGER, POPULATION: FACTS AND METHODS OF DEMOGRAPHY 158 (1971). Projections are also made for economic growth since the arrival of a new industry is likely to create new waste treatment needs. See Guidance, *supra* note 23, at 8; EPA Region I, Draft Environmental Impact Statement Wastewater Collection and Treatment Facilities, Scarborough, Maine, at II-49 to II-52 (Nov. 26, 1975) [hereinafter cited as Scarborough EIS]. The next step is to break down regional or statewide growth projections into a projection for the area actually served by a proposed project. Valley Forge EIS, *supra* at III-20. This may require analysis of local growth plans in order to determine where development has been projected to occur. Guidance, *supra* note 23, at 8. Next, the capability of an area to support population growth and the maximum growth permitted by local zoning ordinances may be

Title II's requirement of sufficient reserve capacity has a double significance. It obviously serves as insurance against the recurrence of water pollution. Also, it promises federal assistance for the construction of STPs and interceptor sewers that will facilitate development in localities. Thus, the EPA's administration of the requirements—including the 1972 FWPCA's reserve capacity mandate—has important implications not only for future water quality but also for the pattern of future development. Even at this early stage it seems clear that the construction grants program will influence the extent, pace, and location of growth in communities throughout the country.

1. *Extent*

On review of a construction grant application, the EPA's determination of the reserve STP capacity to be funded influences the extent or amount of development that can occur in a municipality.²⁸ The EPA requires that sewer facilities be designed in light of expected population increases in the area to be served.²⁹ In the past, STPs were often designed to provide for approximately 20 years of population growth;³⁰

considered; if projected population growth would result in violations of environmental standards or exceed the development levels permitted by zoning, a project's design capacity may be limited to less reserve capacity than necessary to serve projected population increases. *See, e.g.,* note 65 *infra*; EPA Region I, Final Environmental Impact Statement, Proposed Wastewater Collection and Treatment Facilities, Winnepesaukee River Basin, New Hampshire, at III-12 to III-16 (Mar. 27, 1976) [hereinafter cited as Winnepesaukee EIS]. Finally, the projected growth is converted to sewage or wastewater flows, based on estimates of per-capita waste generation. This in turn dictates the design capacity of a project. *E.g.,* Valley Forge EIS, *supra* at III-29; *see* Guidance, *supra* note 23, at 8-9. Another factor affecting design capacity is induced growth. *See* p. 740 *infra*.

28. Construction of additional waste treatment facilities usually permits a greater density of development and hence results in a greater growth potential for any given locality. *See* Environmental Impact Center, Inc., Secondary Impacts of Public Infrastructure in the Denver Region 8 (Dec. 1974); EPA Region IV, Draft Environmental Impact Statement, City of Jacksonville, Florida, Wastewater Management Facilities, Arlington-East Service District 343 (Dec. 1975) [hereinafter cited as Jacksonville EIS]; EPA Region IV, Final Environmental Impact Statement, Crabtree Creek, Wake County, North Carolina Interceptor Sewer 245 (June 1976); Lincoln County EIS, *supra* note 24, at 105.

29. *See* Guidance, *supra* note 23, at 8-9; note 27 *supra*.

30. *See* Falling Creek EIS, *supra* note 27, at 41 (standard planning period for determining an STP's reserve capacity is 20 years); 40 Fed. Reg. 23107, 23108 (1975) (current practice results in approval of STP reserve capacity of up to 20 years); *cf.* 33 U.S.C. § 1288(b)(2)(A) (Supp. V 1975) (1972 FWPCA requirement that waste treatment management planners identify needed treatment works over 20-year period); New Jersey State Dep't of Environmental Protection, Rules and Regulations for Preparation and Submission of Plans for Sewers § 8.2 (on file with *Yale Law Journal*) (design period of STP must be "not less than ten . . . years after completion of construction"; design period should be longer "where future economies are indicated").

Interceptor sewers have typically been designed for a period of approximately 50

more recent projects have sometimes had shorter design periods.³¹ Municipal population projections may be further adjusted to take into account the extra growth induced by the availability of reserve treatment capacity.³² For example, the EPA concluded that the population of Scarborough, Maine, ultimately would be 25% larger as a result of the proposed sewer project.³³

Construction of facilities able to treat substantially more wastewater than is presently generated by a locality will have two effects on the extent of growth. First, growth in excess of an STP's capacity may be impractical because of the relative cost to private developers of providing their own waste disposal systems,³⁴ or because there are local

years; the inconvenience and cost of excavating a sewer trench have been thought to justify a later design year. *See* 40 Fed. Reg. 23107, 23108 (1975); 1 Interceptor Sewers, *supra* note 26, at 54. A recent study, however, suggests that shorter design years may be significantly less expensive. *See id.* at 92.

The EPA has proposed regulations that would shorten design periods. Construction grant applicants would be required to determine an STP's design year based on a cost-effectiveness analysis that would normally compare 10-, 15-, and 20-year alternatives. Interceptors could have a design period of up to 40 years, although the regulations suggest that a design-period of more than 20 years is "highly conjectural." 42 Fed. Reg. 6841 (1977).

31. *See, e.g.*, Valley Forge EIS, *supra* note 27, at summary ¶¶ 2-3 (project planned for 1973 had design year of 1985).

32. *See* Winnepesaukee EIS, *supra* note 27, at II-87, III-12 to III-17 (EPA estimated potential population growth induced by STP and interceptor construction by calculating capability of land to support development and amount of growth permitted by local zoning ordinances). In some localities zoning ordinances allow higher levels of growth if sewers are available. *See id.* at IV-45; EPA Region IV, Draft Environmental Impact Statement for the Proposed Regional Wastewater Facilities Plan for the Grand Strand Region [South Carolina] 8-26 (Dec. 6, 1976) [hereinafter cited as Grand Strand EIS] (municipal regulations on lot size do not apply if sewers are available); EPA Region III, Staff Paper on Reserve Capacity (1975) (unpaginated) (on file with *Yale Law Journal*) [hereinafter cited as Staff Paper]. The availability of sewers also creates pressures to "upzone" or to amend zoning ordinances to allow for more growth. *See* Stansbury, *Suburban Growth—A Case Study*, POPULATION BULL., Feb. 1972, at 5, 15-17; Falling Creek EIS, *supra* note 27, at 28-29.

33. Scarborough EIS, *supra* note 27, at v, III-15, VI-5 to VI-6. *See also* EPA Region X, Final Environmental Impact Statement, North Fremont County [Idaho] Wastewater Facilities 31 (Jan. 1976) [hereinafter cited as Fremont EIS] (improved water quality may induce growth by permitting removal of ban on individual development and by attracting commercial businesses that had been discouraged by reports of contaminated water).

34. Title II's heavy subsidization of sewer construction provides an incentive for developers to size and locate new developments according to the availability of such federally assisted waste treatment systems. *See* URBAN SYSTEMS RESEARCH & ENGINEERING, INC., THE GROWTH SHAPERS 50 (Gov't Printing Off. 1976) [hereinafter cited as GROWTH SHAPERS] (developers prefer land serviced by interceptor sewers in part because they must bear full cost of alternative waste treatment systems); Office of Research and Development, EPA, Secondary Impacts of Transportation and Wastewater Investments: Review and Bibliography 23 (Jan. 1975) [hereinafter cited as Wastewater Investments Review]. To build the same home in an area not serviced by a public sewer, a private developer must be able to absorb, or pass on to the consumer, the full cost of waste treatment system construction. *See generally* note 55 *infra*.

restrictions on the use of waste treatment alternatives. Hence, the determination of reserve treatment capacity may effectively place a ceiling on a municipality's size.

Second, the limit set by existing reserve capacity is likely to constitute a self-fulfilling prophecy. This is due to the Act's financing scheme. Although the federal share of construction costs is 75%,³⁵ a project still requires some local investment in construction, as well as local financing of all maintenance and operating costs. The Act requires that the latter be raised through the assessment of "user charges" that may run in excess of \$200 per user per year.³⁶ Accordingly, it is likely that localities will encourage growth in order to fill STP capacity and thereby lower charges for present users.³⁷ Growth will occur to exhaust the STP's reserve capacity.

2. *Pace*

The availability of reserve STP capacity may cause the pace of growth, or the extent of new development in each year, to accelerate. This acceleration may consist initially of a "spurt" in development activity immediately upon completion of a sewer project. If growth has been slowed by the inability of a locality to accommodate the

35. 33 U.S.C. § 1282(a) (Supp. V 1975).

36. See *id.* § 1284(b)(1); Wall St. J., Oct. 13, 1976, at 1, col. 6 (user charge of \$20 per month in Dunkirk, Ohio); Scarborough EIS, *supra* note 27, at IV-13 (user charge estimated at \$237 per year upon completion of project's first phase). For an explanation of user-charge determinations, see *id.* at IV-12 to IV-13.

The 1972 FWPCA does not specify how the local share of construction costs is to be financed. Assuming a locality issues bonds to pay its share, the debt service may be financed by user charges or by general property taxation. In the latter instance capital costs may fall on property owners not serviced by the sewer project. If the property tax rate rises, a locality may determine that growth is desirable in order to spread the increased tax burden. Staff Paper, *supra* note 32. In fact, one oft-cited advantage of increased treatment capacity and interceptor sewer extensions is the prospect of a reduction in property taxes made possible by the growth that an expanded sewer system can accommodate. See, e.g., Scarborough EIS, *supra* note 27, at VI-7; Valley Forge EIS, *supra* note 27, at IV-49.

An amendment to Title II has been introduced in the 95th Congress that would authorize localities to collect revenues for the operation and maintenance of treatment works facilities through ad valorem or property taxation if the EPA Administrator determines that such taxation would distribute costs among each class of users according to their proportion of the waste treatment load. H.R. 3199, 95th Cong., 1st Sess. § 6 (1977).

37. See SECONDARY IMPACT, *supra* note 18, at 8, 38 (concluding that once treatment works project is completed, primary objective of operating agency is to attract as many users as possible); Falling Creek EIS, *supra* note 27, at 29 ("cost of sewers may induce additional new growth so that the user charges are able to pay for the sewers without becoming exorbitant"); Wastewater Investments Review, *supra* note 34, at 23 (local planners encourage "tap-ins" for quick repayment of construction costs). For a pre-1972 example of a county that used new development to reduce user charges, see Stansbury, *supra* note 32, at 14 (Fairfax County, Va.).

waste treatment needs of new homes, the immediate availability of reserve capacity may release built-up development pressures.³⁸ Localities in fact may encourage the spurt in growth in order to raise funds to pay for reserve capacity.³⁹ In addition, a locality's annual growth rate may increase due to development induced by available reserve capacity.⁴⁰

A New Jersey example reflects the impact of a new STP on both immediate and sustained growth rates. In 1965 the unsewered township of East Windsor, New Jersey, formed a municipal utilities authority and decided to build substantial waste treatment capacity, while its neighbor, West Windsor, hesitated to undertake sewer construction.⁴¹ Although the number of residential building permits authorized annually in West Windsor dropped significantly, the number authorized in East Windsor increased twelvefold in anticipation of STP construction and remained substantially higher than that for West Windsor over the next decade.⁴²

3. Location

Perhaps the most important impact is the influence of Title II-funded sewers on the location of development. This impact results from the placement of STPs and of the interceptor sewers that transport wastes from pollution sources to STPs. Treatment works projects receiving construction grants are likely to be located in polluted areas; localities that cannot demonstrate a need for pollution abatement may not be funded.⁴³ Furthermore, before the EPA Administrator can approve a construction grant, the 1972 FWPCA requires him to determine that the proposed project has been given priority over other treatment works projects by the state water pollution control agency.⁴⁴

38. EPA Region IX, Draft Environmental Impact Statement, Proposed Wastewater Management Program, Livermore-Amador Valley, Alameda County, California 4-73 (Nov. 1975) [hereinafter cited as Draft Livermore EIS]; Scarborough EIS, *supra* note 27, at II-67 to II-68; Lincoln County EIS, *supra* note 24, at 109.

39. See p. 741 *supra*.

40. Lincoln County EIS, *supra* note 24, at 109; EPA Region I, Final Environmental Impact Statement, Wastewater Collection and Treatment Facilities, New Shoreham, Rhode Island 46 (Sept. 16, 1975) [hereinafter cited as New Shoreham EIS] (recreational development pressures will cause acceleration in growth rate when sewer is completed); Fremont EIS, *supra* note 33, at 26 (growth that would have occurred without sewer will occur more rapidly with sewer).

41. See SECONDARY IMPACT, *supra* note 18, at 17-22.

42. *Id.* at 19. Both townships were "predominantly rural, agricultural communities." *Id.* at 17.

43. See Bay to Bay EIS, *supra* note 24, at i; Lincoln County EIS, *supra* note 24, at i (funding delayed pending sanitary district's identification of "significant wastewater problems").

44. 33 U.S.C. § 1284(a)(3) (Supp. V 1975).

The state agencies are instructed by the 1972 FWPCA to "rank, in order of priority," projects needed to achieve the Act's pollution abatement deadlines.⁴⁵ Hence, waste treatment systems with reserve capacity are likely to be built, and to stimulate growth, in or adjacent to polluted areas. This general tendency is illustrated in New Hampshire's Winnepesaukee Lakes Region, where the EPA recommended a regional STP to sewer the region's more polluted areas first.⁴⁶

An additional impact on the location of development may result from the EPA's policy of regionalization: construction grant applicants are instructed by EPA guidelines to consider regional waste treatment alternatives.⁴⁷ Regional solutions may result in the construction of one or more central STPs that require laying interceptor sewers through open or restricted-growth lands to connect treatment

45. *Id.* § 1313(c)(3)(H). By regulation, "the State priority system must be designed to achieve optimum water quality improvement consistent with the goals and requirements of the Act." 40 C.F.R. § 35.915(a) (1976). The regulations direct that the state priority list shall determine which projects to fund based on severity of pollution problems, population affected, the need for preservation of high quality waters, national priorities, funds available, and "additional factors identified by the State." *Id.* § 35.915(c)(1). One study recommended that this last provision be used to coordinate water pollution abatement with state land-use policies. See SECONDARY IMPACT, *supra* note 18, at 46-47. This possibility, however, is apparently constrained by the regulatory mandate to achieve "optimum water quality improvement." In any event, it does not appear that states have used the "additional factors" authorization to implement land-use goals. Water quality objectives dominate state priority systems. See Commonwealth of Virginia, Sewerage Facility Construction Grants Priority System (Sept. 1973) (on file with *Yale Law Journal*); State of Connecticut, Introduction to Fiscal Year 1977 Priority System (undated; unpaginated) (on file with *Yale Law Journal*); State Construction Grant Priority Systems for Pennsylvania, New Jersey, and Delaware (undated) (EPA Region III document; on file with *Yale Law Journal*); cf. SECONDARY IMPACT, *supra* note 18, at 46-47 (Title II priority system in New Jersey gave highest ranking to polluted shore areas).

46. Winnepesaukee EIS, *supra* note 27, at x, xiii, I-1. The EPA began its study of the Winnepesaukee Lakes Region by determining what "portion" of the region had the most critical pollution problems. Municipalities in this portion—the "primary study area"—received further study in order to determine the "design service area" in which sewers would be built first. The possibility that sewers might be extended to the less polluted, "peripheral" study area was not foreclosed since interceptor sewers were sized to serve both areas. Cf. Valley Forge EIS, *supra* note 27, at IV-42 (initial service area of regional treatment works project constitutes "existing health hazard area" but may be extended to unbuilt land areas in future).

The Winnepesaukee project illustrates an emerging EPA policy promoting the "staging" of waste treatment systems: cost effectiveness guidelines proposed by the agency require that interceptor routes be planned "to serve existing developments and those areas where development is well underway." 42 Fed. Reg. 6841, 6844 (1977).

47. See Guidance, *supra* note 23, at 9-10. The EPA cites a number of grounds for regionalization: economies of scale, efficiency in the operation and maintenance of STPs, the 1972 FWPCA's policy of arcawide waste treatment management (33 U.S.C. § 1251(a)(5) (Supp. V 1975)), and the ease of adapting larger treatment systems to more advanced technologies. See, e.g., EPA Region VIII, Final Environmental Impact Statement, Greeley [Colorado] Region Wastewater Management Program 152 (1976) [hereinafter cited as Greeley EIS].

plants with polluted areas.⁴⁸ In Chester County, Pennsylvania, for example, connection of one settled area to an area in which a central STP was to be located necessitated routing an interceptor sewer through "a very rural setting."⁴⁹ One study concluded that half of the land sewered by 52 interceptor sewer projects was vacant.⁵⁰ Typically such sewers have been built with sufficient reserve capacity to serve 50 years of growth.⁵¹ Given local pressures to add users in order to spread the operation, maintenance, and construction costs of the sewer, it is likely that localities will face pressures to permit development of the vacant land.⁵² As one observer concluded: "No amount of

48. See, e.g., EPA Region IX, Draft Environmental Impact Statement & Environmental Impact Assessment for Reno-Sparks [Nevada] Joint Water Pollution Control Plant, Cross-Town Sewer and Lawton-Verdi Interceptor Extension 1-27 (Jan. 1977) [hereinafter cited as Reno-Sparks EIS] (construction of interceptor sewer from Lawton to Verdi, Nevada, will facilitate development of as much as 87% of vacant, developable land); Jacksonville EIS, *supra* note 28, at 343 (extension of interceptor sewer enables development in areas in which restrictions on pollutant discharges and septic tanks would not allow as much growth); Summary—Final Environmental Impact Statement, Proposed Wastewater Management Program, Livermore-Amador Valley, Alameda County, California 18 (Aug. 1976) [hereinafter cited as Final Livermore EIS] (proposed sewer will accommodate growth sufficient to urbanize 5,000 acres of undeveloped land). The EPA's policy of regionalization does not always lead to the recommendation of a central STP. See EPA Region V, Final Environmental Impact Statement Sewage Treatment Facilities for the South Bloomington and Lake Monroe Service Area, Bloomington, Indiana 5-1 (Aug. 1976) [hereinafter cited as Bloomington EIS] (EPA's consultant concluded that regionalization of waste treatment would not be cost effective).

49. Valley Forge EIS, *supra* note 27, at II-25, IV-11. The Valley Forge project was designed to serve two separate developed areas approximately five miles apart. Therefore, to treat wastes in its single STP, it was necessary to connect the two areas with an interceptor sewer. This sewer passed through lands described as "vacant," "cropland," "woodlands" and "recreational." Compare *id.* at plate 3 with *id.* at plate 13.

50. See 1 Interceptor Sewers, *supra* note 26, at 105, 107. The EPA confirms this estimate but points out that the cost of constructing reserve capacity in interceptors through vacant lands constitutes only 9.4% of the total interceptor costs. Thus the EPA questions the extent to which Title II creates an incentive to develop vacant lands in order to pay the greater construction costs resulting from the sewerage of vacant, in addition to developed, lands. Office of Planning and Evaluation, EPA, Evaluation of the Report on Interceptor Sewers and Suburban Sprawl 4-5 (Jan. 1975) [hereinafter cited as EPA Evaluation]. The agency recognizes, however, that regionalization may cause significant impacts, which necessitate in-depth environmental analysis before the awarding of a construction grant for such a project. See 40 C.F.R. § 6.512(a)(5) (1976).

51. See note 30 *supra*.

52. See Stansbury, *supra* note 32, at 15-17. In 1969 the Fairfax County, Virginia, Board of Supervisors approved a plan that established holding zones, or areas of low-density development; on the same night they authorized construction of an interceptor through one of the zones. After subsequently rezoning two border parcels of land for single-family homes, the Board, noting the availability of the sewer, determined that "fairness" to other landholders required that the holding zone be rezoned for higher density development. *Id.* Cf. Falling Creek EIS, *supra* note 27, at 27 (examples of rezoning of vacant or agricultural land that EPA speculates are due to actual or planned interceptor construction).

planning can stop more intensive development when good roads and sewage disposal facilities are readily available.’ ”⁵³

B. *Sewer-Induced Growth Impacts and Planning*

Because development is likely to occur where sewerage facilities are available, the planning of sewers can serve as a powerful growth-guidance mechanism.⁵⁴ Private developers normally determine the size and location of new residential subdivisions according to the availability of publicly financed sewers.⁵⁵ New sewers could be planned for areas in which localities prefer growth. A municipality could avoid intensive development of areas not planned for growth by providing them with sewerage systems designed to meet only existing treatment needs.

1. *Inadequate Planning under Title II*

However, the impact of Title II-funded sewer construction on the extent, pace, and location of growth is not being adequately planned. In some localities plans have not been prepared;⁵⁶ in others the plans are dated or otherwise deficient.⁵⁷ Moreover, local planning agencies

53. Falling Creek EIS, *supra* note 27, at 27 (quoting George A. Horkan, Jr.).

54. That sewers are a prime determinant of growth is now well-recognized. See COUNCIL ON ENVIRONMENTAL QUALITY, LAND USE 36-38 (Gov't Printing Off. 1974); COMM. ON COMMUNITY DEVELOPMENT, THE DOMESTIC COUNCIL, NATIONAL GROWTH AND DEVELOPMENT 46 (Gov't Printing Off. 1974) (report submitted to Congress pursuant to 42 U.S.C. § 4503(a) (1970)); cf. G. MILGRAM, THE CITY EXPANDS 88-89 (Gov't Printing Off. 1967) (study of postwar urbanization in North Philadelphia found sewers most important determinant of growth).

55. See GROWTH SHAPERS, *supra* note 34, at 48-57; Office of Research & Development, EPA, Secondary Impacts of Transportation and Wastewater Investments: Research Results 1, 10 (July 1975) [hereinafter cited as Wastewater Investments Research]; cf. Fremont EIS, *supra* note 33, at 31 (developers determine not to build private facilities due to planning of public project). Because of low maintenance requirements, consumers generally prefer homes that are serviced by sewers. See GROWTH SHAPERS, *supra* note 34, at 50. The availability of a public waste treatment system is thus an important factor in a private developer's estimation of an area's attractiveness to consumers, and hence of the price he can charge for a new home. See Wastewater Investments Research, *supra* at 10. Furthermore, a sewer system facilitates intensive, and thus more profitable, development by enabling developers to build more homes on the same land. See Wastewater Investments Review, *supra* note 34, at 23. At the same time, nonpublic waste treatment systems—e.g., septic tanks and smaller, “package” STPs—may not be permitted in many communities. See GROWTH SHAPERS, *supra* note 34, at 50.

56. See Reno-Sparks EIS, *supra* note 48, at 1-58 (absence of land-use plan); Fremont EIS, *supra* note 33, at 3 (absence of local land-use planning); Winnepesaukee EIS, *supra* note 27, at III-11, VI-15 (all municipalities participating in construction of treatment works project had failed to adopt, and two had failed to prepare, comprehensive plans); Bloomington EIS, *supra* note 48, at 4-10-5 (lack of land-use plan for one area to be served by proposed project); Bay to Bay EIS, *supra* note 24, at 52 (county comprehensive plan yet to be completed).

57. See New Shoreham EIS, *supra* note 40, at 23 (comprehensive plan of New Shore-

may be overworked and inadequately staffed.⁵⁸ It is therefore not surprising that many localities do not comprehend the growth implications of sewer design.⁵⁹ A study commissioned by the Council on Environmental Quality (CEQ) concluded that the vast majority of planning agencies did not "critically examine alternatives to existing development trends" and "had never studied the possible adverse secondary impacts of rapid development."⁶⁰ Moreover, the report found that even when local planners recognized that sewer construction might lead to adverse impacts, they viewed growth as inevitable and thus did not believe that sewer design could be used to guide and control development.⁶¹

Since local growth planning is often inadequate, it is likely that the EPA is receiving construction grant applications that do not embody full consideration of probable growth impacts. Although the EPA is well aware of sewer-induced impacts, the agency does not believe that it has the authority to plan or regulate land development.⁶² Therefore, to the extent that sewers can be designed to guide and control growth, the designing must be done by construction grant applicants. In fact, the EPA has required local growth planning as a condition for at least two construction grants.⁶³

Yet even where waste treatment systems are designed by localities to implement local objectives, the structure and administration of Title

ham, Rhode Island, did not evaluate how much development could take place before it would infringe on environmental and amenity values of Block Island); Scarborough EIS, *supra* note 27, at II-53 (local planning board in process of updating 1964 comprehensive plan). In the Chester County project an analysis by the EPA found that six participating municipalities had not adopted comprehensive plans since passage of a new state planning code in 1968; however, four of the municipalities were updating pre-1968 plans, and one was preparing a new plan. See Valley Forge EIS, *supra* note 27, at III-34 to III-35. The analysis also found that two plans established ambivalent goals since they set objectives both to maintain the municipalities' quiet and historic character and to increase the local tax base. See *id.* at III-36, III-38.

58. See, e.g., Scarborough EIS, *supra* note 27, at II-54 (planning board responsible for implementation of several programs other than preparation of comprehensive plan; board members served on own time, and board lacked adequate professional support).

59. Localities may also be susceptible to pressure from developers. See 2 Interceptor Sewers, *supra* note 26, at 69 (town planning boards in Ocean County, New Jersey, confronted well-financed and well-staffed developers, and board members frequently disqualified themselves from participation in sewer-project decisions because of landholding, real estate, or engineering interests in projects); Stansbury, *supra* note 32, at 10, 19-20 (developers were major participants in interceptor extension and zoning decisions of county board of supervisors). See generally Ellickson, *Suburban Growth Controls: An Economic and Legal Analysis*, 86 YALE L.J. 385, 407-10 (1977).

60. 1 Interceptor Sewers, *supra* note 26, at 60.

61. E.g., 2 *id.* at 69-70 (Ocean County, N.J.).

62. Winnepesaukee EIS, *supra* note 27, at xvi; p. 751 *infra*.

63. See Valley Forge EIS, *supra* note 27, at VI-2; Fremont EIS, *supra* note 33, at v.

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II restricts a locality's flexibility to implement these growth goals. For instance, the EPA's funding of reserve STP capacity may be consistent with local objectives to the extent that the plant's size approximates desired growth. However, the growth induced by the availability of reserve capacity may be inconsistent with such objectives if a locality desires less or more growth than that projected by the EPA in its calculation of sufficient reserve capacity.⁶⁴ At present there is evidence that EPA is scaling down the reserve capacity of STP projects proposed by local applicants.⁶⁵ In Montgomery County, Maryland, a \$273 million project was not funded partly because the EPA found the proposed reserve capacity to be unrealistically high.⁶⁶ And in Chester-

64. In calculating wasteflows, *see* note 27 *supra*, the EPA attempts to compile data that enable an accurate prediction of the amount of growth expected in the area during the design period of the proposed treatment works. In the absence of firm evidence that there will be significantly more growth than projected, the EPA relies on past population and development trends and known constraints on development. *See id.* In EPA Region III the agency will not fund reserve treatment capacity in excess of projected economic growth unless an applicant can show that industries have made firm commitments to expand or locate in the project's service area. *See* Staff Paper, *supra* note 32; Telephone Interview with Steve Torok, Chief, EIS Preparation Section, EPA Region III (Sept. 15, 1976) (notes on file with *Yale Law Journal*) [hereinafter cited as Torok Interview]. Moreover, the EPA has refused to fund projects in which the proposed treatment capacity was in excess of that needed to serve projected growth. *See* pp. 747-48 *infra*. Thus it appears that a locality planning to grow more quickly than growth projections indicate must establish that its desired rate of growth is more predictive than its projected growth rate.

At present, agency policy does not allow the EPA to fund oversized projects even where the applicant agrees to pay 100% of the cost for capacity greater than that indicated by population projections; however, regulations have been proposed to allow funding of such projects "in special cases." *See* 42 Fed. Reg. 6841, 6842, 6844 (1977).

65. The EPA's actions evince a distrust of local population projections and a growing concern with adverse growth impacts induced by projects with distant design years. *See* Staff Paper, *supra* note 32 (applicant overdesign partly result of localities' desire to take advantage of generous federal funding and designing engineers' interest in larger projects that generate larger fees). *See generally* EPA, Cost Effectiveness in Water Quality Programs: A Discussion 29-35 (undated) [hereinafter cited as Cost Effectiveness] (discussing factors that consulting design engineers should consider when choosing between short and long design periods).

The EPA may also limit reserve capacity to control development that could lead to violations of other environmental standards. In Ocean County, New Jersey, for instance, the EPA announced that it would not fund a plant larger than 24 million gallons per day (MGD) for fear that growth stimulated by a larger capacity would "encourage air quality deterioration." 1 EPA Region II, Final Environmental Impact Statement on a Wastewater Treatment Facilities Construction Grant for the Central Service Area of the Ocean County Sewerage Authority in Ocean County, New Jersey 228-29 (Oct. 1974) [hereinafter cited as Ocean County EIS]. By so limiting the capacity of the STP, the EPA "effectively limit[ed] the population to a safe level of 250,000" until new techniques of air pollution abatement are developed and implemented. SECONDARY IMPACT, *supra* note 18, at 38.

66. *See* EPA, Administrator's Decision on the Proposed Dickerson Wastewater Treatment Plant Grant Application 1-2 (Aug. 20, 1976). The county had requested funding for an STP with a waste treatment capacity of 60 MGD. The EPA returned the application, noting that only a 35-MGD capacity appeared justified.

field County, Virginia, the EPA decided to fund only half of the reserve capacity requested by the locality even though the agency acknowledged that the county was experiencing a rapid growth rate.⁶⁷ Although the EPA has focused primarily on "overdesign,"⁶⁸ the calculation of population projections could also require that "underdesigned" projects be enlarged where the agency concludes that the extent of development in a locality is likely to be greater than the level of growth desired by a community.⁶⁹ In the Winnepesaukee project, the EPA noted its belief that the applicant's population projections were too low.⁷⁰

The potential for conflict between sewer-induced growth and local planning objectives may arise not only from a new STP's impact on the extent of municipal growth. In addition, the acceleration in the pace of growth induced by the availability of reserve capacity may lead to an increased demand for other basic services before a locality had planned to make such services available.⁷¹ By the same token, the locational impacts engendered by treatment works construction may conflict with local objectives to the extent that growth is stimulated in undeveloped or sensitive areas crossed by the interceptor sewers of regional systems. Furthermore, a locality planning to grow in undeveloped, unpolluted areas may be frustrated insofar as the EPA

67. See *Falling Creek EIS*, *supra* note 27, at 1, 41. The applicant had sought to expand its system from a 6-MGD capacity to 12 MGD; the EPA elected to fund expansion to 9 MGD. The EPA based its decision on population projections from the Virginia Department of State Planning and Community Affairs. It further noted that the area's recent growth rate "cannot be expected to continue indefinitely." *Id.* at 41.

68. A treatment works project is overdesigned to the extent that its reserve capacity exceeds the growth projected to occur during the design period.

69. If a locality desired to grow less quickly than population projections indicated and sought a construction grant for an STP that was underdesigned, it is not clear whether the EPA would fund the project. See Telephone Interview with Barbara Metzger, Chief, Environmental Impacts Branch, EPA Region II (Sept. 14, 1976) (notes on file with *Yale Law Journal*) (would not fund). Since localities rarely underdesign treatment works, the question may be academic. *Id.* When one locality did apply for a grant to assist construction of an underdesigned STP, the EPA required that the plant be built with the reserve capacity indicated by projections of growth. The agency apparently thought that the locality had misjudged the reserve capacity required for treatment of industrial wastes. Telephone Interview with Dennis Capella, Pa. Section, Water Planning Branch, EPA Region III (Sept. 16, 1976) (notes on file with *Yale Law Journal*).

70. See *Winnepesaukee EIS*, *supra* note 27, at xi-xii, II-93. The EPA observed that a more recent projection reflecting new trends in seasonal growth indicated that the applicant had underestimated population growth during the project's design period by 11,000, but that the project could be modified at a later date to accommodate the additional growth.

71. See, e.g., *Falling Creek EIS*, *supra* note 27, at 29. To its credit, the EPA recognizes this possibility and often warns localities of the consequences of more rapid development. See, e.g., *Scarborough EIS*, *supra* note 27, at VI-9 (increased demand for school facilities).

refuses to fund projects that are ranked too low on state priority lists or that do not demonstrably meet a present abatement need.⁷²

2. *The Consequences of Inadequate Planning*

From the planner's perspective, poorly planned sewer projects may be inefficient. For instance, a planner may give high priority to treatment works construction in an unpolluted area where substantial investment has already been made in development infrastructure, such as schools, roads, and water systems. Since the area is unpolluted, the project would not be readily funded under Title II. It would therefore be difficult to guide development to the area, as it would lack the waste treatment capacity necessary to accommodate a larger population. The cost to the locality would be more than a loss of local control: its investment in development infrastructure would be wasted.⁷³ At the same time the 1972 FWPCA might require and fund a treatment works system with reserve capacity in a polluted area not planned to grow, resulting in added local expenditure to provide the necessary infrastructure.

The planner also appreciates that sewers funded by Title II could actually have a negative impact on the area's environmental quality. If a locality is unable to withstand pressure to develop, due to the need to raise funds to pay for the treatment works project, it may be faced with more wastewater than its new facility can handle. An illustrative case is that of Fairfax County, Virginia, where sewers built in the 1960s to abate pollution stimulated such growth that water

72. By not funding interceptor construction in undeveloped areas, the EPA's tendency to require the staging of treatment works projects, *see* note 46 *supra*, constrains the ability of localities to encourage growth in such areas. Since localities must pay the full cost of sewerage in undeveloped areas, they are more likely to promote settlement in areas already developed, areas for which the EPA will meet 75% of sewer construction costs. Staging of sewer projects may therefore reinforce existing growth patterns.

The priority system and the EPA's policy of regionalization do not exhaust Title II's potential to stimulate growth impacts that are inconsistent with local desires. *See, e.g., City of New Haven v. Train*, 9 Env'r. Rep. Cas. 1553 (D. Conn. 1976) (EPA's informal decision not to fund STP project favored by city held arbitrary and capricious). The city of New Haven proposed to transfer partially treated wastes from an STP in an industrial park to another plant for further treatment; by so doing the city hoped to avoid using valuable industrial-park land for the upgrading of the first STP. The EPA had informally rejected this proposal based on a rule of thumb that precluded the funding of alternatives whose monetary cost exceeded that of the least-cost alternative by more than \$500,000, regardless of the nonmonetary costs incurred by the least-cost alternative. The court held that the rule violated the agency's own cost effectiveness guidelines, 40 C.F.R. pt. 35, app. A (1976).

73. *See generally* Real Estate Research Corp., *The Costs of Sprawl* (Gov't Printing Off. Apr. 1974).

quality actually declined.⁷⁴ Commenting on the development, one study observed that "the remedy can be more damaging than the disease."⁷⁵ Growth induced by sewer construction may also contribute to air pollution—a possibility that the EPA has recognized.⁷⁶

Poorly planned growth impacts do more than inflict costs. They also waste the opportunity to use sewer design to engender salutary development trends. To the extent that Title II hamstring local planning, a powerful growth-guidance mechanism is lost. The EPA has demonstrated a growing awareness of these problems. Yet, as the next section will demonstrate, neither the agency nor a network of existing federal planning devices can foster the needed coordination of waste treatment projects and local growth objectives.

II. Federal Planning and Title II

A. *Functionalism*

Congress has recognized the risk to localities of poorly planned waste treatment systems. It has consistently provided for the coordination of public works programs, such as Title II, with the development objectives of local governments. With regard to water quality objectives, such coordination, or "comprehensive planning,"⁷⁷ appears to be required by the 1972 FWPCA: § 208⁷⁸ establishes a planning process designed to coordinate "structural" solutions to water quality problems, such as treatment works construction, with "nonstructural" solutions, such as increased land-use regulation.⁷⁹ Moreover, Congress has established other planning laws that require federal agencies to take into account comprehensive planning and to recognize environmental impacts.⁸⁰

The extent to which sewer projects can be planned comprehensively is constrained, however, by Title II's pollution abatement objective. The program's "functionalism"—its preoccupation with a dominant governmental purpose—is explicit in its mandate and apparent in its

74. See Stansbury, *supra* note 32, at 18-20.

75. SECONDARY IMPACT, *supra* note 18, at 1.

76. See Ocean County EIS, *supra* note 65, at 228-29. Other environmental impacts resulting from sewer-induced growth include increased erosion and the degradation of streams by STP pollutant discharges if the STP becomes overloaded with stormwaters or the wastes of excessive development. See GROWTH SHAPERS, *supra* note 34, at 54-55.

77. For a definition of comprehensive planning, see pp. 760-61 & note 131 *infra*.

78. 33 U.S.C. § 1288 (Supp. V 1975).

79. See EPA, Guidelines for Areawide Waste Treatment Management Planning 1-2 (1975) [hereinafter cited as § 208 Guidelines]; pp. 751-52.

80. See pp. 754-55, 757-58 *infra*.

administration. The 1972 FWPCA's stated objective, which directs decisionmaking under the Act, is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."⁸¹

The Act's functionalism dominates Title II's administering agency, the EPA. Former EPA Administrator Russell Train recognizes the agency's lack of an "explicit mandate for direct land use control," which "has limited [its] efforts to explicitly address land use consideration in its program[s]."⁸² Accordingly, the EPA has distinguished its functional responsibility for pollution abatement from the responsibility of localities to plan growth. In addressing the issue of development that might be induced by the Chester County, Pennsylvania, project, the EPA described its role as that of "an advocate for the environment based on legislative mandates. It is up to the municipalities to accept the responsibility for controlling growth."⁸³ This functional bias impedes the comprehensive planning envisioned by several congressional directives.⁸⁴

B. *Federal Comprehensive Planning and Functional Bias*

1. *Section 208*

Within the construction grants program's functional framework, § 208 injects an element of comprehensiveness. The section provides for areawide or regional waste treatment planning and management.⁸⁵

81. 33 U.S.C. § 1251(a) (Supp. V 1975). For example, § 201(g)(2)(A) instructs the Administrator that construction grants should not be made until the applicant has demonstrated that the proposed project will provide for "the best practicable waste treatment technology . . . consistent with the purposes of this [Title]." *Id.* § 1281(g)(2)(A). Section 201(a) defines Title II's purpose as being "to require . . . waste treatment management . . . practices which will achieve the goals of this [Act]." *Id.* § 1281(a). The goals of the Act are to achieve "fishable and swimmable" waters and to eliminate the discharge of pollutants into the navigable waters. *Id.* § 1251(a)(1), (2); see note 10 *supra*.

82. Train, *The EPA Programs and Land Use Planning*, 2 COLUM. J. ENV'T'L L. 255, 281 (1976).

83. Valley Forge EIS, *supra* note 27, at IV-42.

84. The effect of functionalism on federal decisionmaking has been noted before. One congressional advisory commission found:

The great majority [of federal administrators] are unsympathetic to efforts . . . which are geared to interrelating Federal urban development programs and to injecting a broad-gauged metropolitan viewpoint into the administration of such programs. And most of this distrust is rooted in fear—. . . fear of a dilution of individual program goals, fear of meddling by inept generalists, . . . and fear of a diminution of . . . agency autonomy.

SUBCOMM. ON INTERGOVERNMENTAL RELATIONS OF THE SENATE COMM. ON GOVERNMENT OPERATIONS, 89TH CONG., 1ST SESS., *THE FEDERAL SYSTEM AS SEEN BY FEDERAL AID OFFICIALS* 92 (Comm. Print 1965).

85. For a more extensive discussion of § 208 and its implications, see Phillips, *supra* note 5, at 83-94; Comment, *supra* note 10.

Section 208 requires planners to identify waste treatment problems and to evaluate possible solutions.⁸⁶ To implement this planning objective, state governors or local officials are authorized to designate § 208 "planning" agencies for regions having substantial water quality problems. The designees must then develop and adopt plans that govern, subject to approval by the EPA Administrator, the awarding of construction grants.⁸⁷ The section also instructs the Governor to implement approved plans by designating one or more § 208 "management" agencies to become the exclusive recipients of Title II construction grants in the § 208 region.⁸⁸ Thus the section institutes a comprehensive planning process for waste treatment management—a process that is to be administered regionally where justified by the existence of significant water pollution. Furthermore, it establishes a process described by former EPA Administrator Train as presenting an opportunity to encourage the further development of comprehensive planning by state and local governments.⁸⁹

However, § 208 plans at present are still in preparation, and some planning areas have yet to be designated.⁹⁰ Moreover, one EPA official indicates that funding for § 208 may not be adequate to fulfill all of the section's requirements for treatment works planning.⁹¹

86. See 33 U.S.C. § 1288(b) (Supp. V 1975); H.R. REP. NO. 911, 92d Cong., 2d Sess. 95-97 (1972).

87. 33 U.S.C. §§ 1284(a)(1), 1288(b) (Supp. V 1975). State governments are responsible for planning in areas not designated. See *id.* § 1288(a)(6); *Natural Resources Defense Council, Inc. v. Train*, 396 F. Supp. 1386, 1392 (D.D.C. 1975).

88. 33 U.S.C. § 1288(c), (d) (Supp. V 1975). The section distinguishes planning from management agencies. Compare *id.* § 1288(a)(2) with *id.* § 1288(c)(1). The Governor must designate "one or more" management agencies to implement each § 208 plan. See *id.* § 1288(c)(1), (2)(A). Such management agencies may be existing or newly created local, regional, or state agencies, or political subdivisions. The section does not preclude the designation of planning agencies as management agencies. See *id.* § 1288(c)(1); see generally § 208 Guidelines, *supra* note 79, at 7-1 to 7-13.

89. See Train, *supra* note 82, at 285-86.

90. See EPA, Summary, Status [of] Planning & Grant Process, 208 Water Quality Management (July 1, 1976) (listing designated § 208 planning areas) (on file with *Yale Law Journal*).

There have been substantial delays in the implementation of § 208. First, implementing regulations required under the Act were delayed. See 1975 Hearings, *supra* note 9, at 193 (Guy Ormsby, Jr., Nat'l Ass'n of Regional Councils). Second, the EPA initially interpreted § 208 to apply only to those areas specifically designated by state and local governments. See *id.* This view was rejected in a 1975 court decision requiring state water pollution control agencies to undertake § 208 planning in nondesignated areas. See note 87 *supra*. Section 208 plans must now be completed by November 1, 1978, 40 C.F.R. § 131.20(i) (1976), more than two years after the original statutory deadline, 33 U.S.C. § 1288(a), (b)(1) (Supp. V 1975).

91. Telephone Interview with Walter Grosyk, EPA Deputy Director of Water Planning (Sept. 15, 1976) (notes on file with *Yale Law Journal*) [hereinafter cited as Grosyk Interview]. Section 208 funding has apparently raised eyebrows on another front: the program

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Hence, thousands of waste treatment systems have been or will be constructed without adequate § 208 planning.

Even if § 208 plans were adopted, it is unlikely that they would effectively design sewerage systems to implement locally determined growth objectives. Although § 208 clearly encompasses land-use⁹² or growth-planning considerations, the EPA interprets the provision simply to authorize the utilization of land-use requirements as a non-sewer means of achieving water quality objectives.⁹³ The agency's outlook is therefore functional: Congress intended only that a comprehensive approach to waste treatment management planning be developed; § 208 was not enacted to provide a means of designing treatment works projects to implement planned growth objectives.⁹⁴

is being reassessed by the Office of Management and Budget, which fears that the section will become an "open-ended slush fund." 7 ENVIR. REP. (BNA) 1727 (1977).

92. Section 208 planning must include a process to "set forth procedures and methods (including land-use requirements) to control to the extent feasible" agricultural, silvicultural, mine-related, and construction-related sources of pollution. 33 U.S.C. § 1288 (b)(2)(F)-(H) (Supp. V 1975). It must establish a program to "regulate the location," *id.* § 1288(b)(2)(C)(ii), of waste treatment "facilities" that may result in any discharge within the § 208 planning area. Former EPA Administrator Train indicates that "[t]his phrase might be interpreted to refer to regulation of the patterns and intensity of buildings, such as homes or commercial buildings, which contribute to the discharge of wastes into navigable waters." Train, *supra* note 82, at 275. Train's interpretation of the word "facilities" appears strained at best. As used elsewhere in the Title, "facilities" seems to refer solely to components of waste treatment systems. See 33 U.S.C. §§ 1281(d), (e), 1288 (b)(2)(D) (Supp. V 1975); S. REP. NO. 414, 92d Cong., 1st Sess. 37-38 (1971), reprinted in [1971] U.S. CODE CONG. & AD. NEWS 3668, 3704. The more expansive interpretation of "facilities" being proffered would attribute to Congress an intent to foster national land-use planning through § 208 without any statement to that effect. Such a back-door approach to land-use planning has been criticized in one state. Rutland (Vt.) Daily Herald, Jan. 28, 1976, at 14, col. 1. It is unlikely that Congress would have taken the dramatic step of federalizing land-use control without explicitly acknowledging that intent.

93. See § 208 Guidelines, *supra* note 79, at 1-2 (EPA suggests that § 208 planning agencies give particular emphasis to "non-structural" approaches to pollution control including land management).

94. Grosyk Interview, *supra* note 91; see H.R. REP. NO. 911, 92d Cong., 2d Sess. 95 (1972) ("The [§ 208] planning process [provides] a management concept to coordinate the many separate requirements of [the 1972 FWPCA] in an effective attack for restoring our Nation's waters.")

This does not mean that § 208 will not result in limited coordination of pollution abatement goals with regional or local growth-planning objectives. In fact, § 208 clearly envisions that land-use and zoning plans will be affected by waste treatment management plans. S. REP. NO. 414, 92d Cong., 1st Sess. 37 (1971), reprinted in [1971] U.S. CODE CONG. & AD. NEWS 3668, 3704; § 208 Guidelines, *supra* note 79, at 4-2 ("Throughout the process of incorporating land use considerations into the 208 plan, primary reliance should be placed on utilizing existing land use plans, projections, and controls, although it will be necessary in some cases to identify necessary revisions to incorporate changes responsive to water quality objectives."); *Shaping the Future*, ENVIRONMENT NEWS, Feb. 1977, at 16 (New England Regional Off., EPA, publication) ("[S]ome of the actions decided upon [in § 208 planning work] will undoubtedly influence [the] pattern of future growth.") However, there is no evidence in the legislative history or the § 208 Guidelines to suggest that waste treatment management plans should be altered to implement planned growth objectives.

Section 208(b)(2)(E) does require areawide waste treatment planners to identify environmental impacts.⁹⁵ The EPA apparently intends to implement this provision by requiring the assessment of environmental impacts and the drafting of an environmental impact statement where necessary.⁹⁶ As will be seen, however, impact statement preparation involves recognition but not planning of sewer-induced growth impacts.⁹⁷

2. A-95 Review

The A-95 review process offers localities another opportunity to coordinate Title II-assisted treatment works projects with local planning objectives. Circular No. A-95⁹⁸ implements § 204 of the Demonstration Cities and Metropolitan Development Act of 1966⁹⁹ and the Intergovernmental Cooperation Act (IGCA)¹⁰⁰ by establishing a Project Notification and Review System. Through designated state-level and regional clearinghouses,¹⁰¹ the system gives state and local governments notice of and an opportunity to comment on federally funded projects, including treatment works construction funded by Title

Other commentators agree that § 208 land-use planning is limited by the section's focus on functional water quality objectives. See Comment, *supra* note 10, at 1059-62; Mandelker, *The Role of the Local Comprehensive Plan in Land Use Regulation*, 74 MICH. L. REV. 899, 916 (1976).

While § 208 planning could be viewed as an opportunity for coordination of waste treatment with other state and local objectives, see Train, *supra* note 82, at 286, it may be preferable to combine waste treatment management and growth planning in a single process. For such a proposal, see pp. 773-75 *infra*.

95. 33 U.S.C. § 1288(b)(2)(E) (Supp. V 1975).

96. § 208 Guidelines, *supra* note 79, at 11-1.

97. See pp. 757-60 *infra*.

98. Office of Management and Budget (OMB), [Circular No. A-95 Revised], Evaluation, Review, and Coordination of Federal and Federally Assisted Programs and Projects, 41 Fed. Reg. 2052 (1976).

99. 42 U.S.C. § 3334 (1970 & Supp. V 1975).

100. *Id.* §§ 4201-4244 (1970). The IGCA requires the President to implement specific intergovernmental cooperative objectives by issuing rules and regulations governing the formulation, review, and evaluation of federal development programs. *Id.* § 4231(a). President Johnson delegated this responsibility to the OMB. Memorandum of Nov. 8, 1968 [Delegation of Authority under Intergovernmental Cooperation Act of 1968], 33 Fed. Reg. 16487 (1968).

101. See 41 Fed. Reg. 2052, 2052-56 (pt. I) (1976). The circular also provides for clearinghouse review (*described at* note 102 *infra*) of federal development projects and state-level plans required for federal programs, and further encourages the creation of uniform districts for federal, state, and areawide planning. *Id.* at 2056-57 (pts. II-IV).

State and regional clearinghouses are designated by the Governor. *Id.* at 2058 ¶ 10.a., b.1. The OMB may also recognize metropolitan clearinghouses. *Id.* ¶ 10.b.2. Clearinghouses are responsible, *inter alia*, for evaluating the significance of proposed federal or federally assisted projects for state, regional, or local plans or programs; for disseminating project notifications to appropriate state and local agencies, local governments, and regional organizations; and for providing liaison between federal agencies contemplating

II.¹⁰² The comments provide federal officials, such as the EPA Administrator, with nonfederal governmental input.

The potential for nonfederal input is often thwarted by the neglect of localities on the one hand and functional decisionmaking on the other. First, since the last step in A-95 review is the forwarding of comments on prospective sewer construction to the EPA Administrator, it is essential to the review process that such comments be thoroughly prepared. However, a study of eight interceptor sewer projects concluded that A-95 review was "a pro-forma procedure involving no serious study of the relationship between the sewer project and other regional plans or activities."¹⁰³ Regional clearinghouses routinely endorsed interceptor sewer projects without comment on land-use implications.¹⁰⁴ This apparent reluctance to perform A-95 review adequately may in part be explained by insufficient funding of the program.¹⁰⁵ Another explanation may be that an adverse comment on the construction grant application of one of the region's municipal-

development projects and state or regional agencies or local governments having plans or programs that might be affected by the proposed project. *Id.* at 2053 § 3.a., b.

102. *Id.* at 2053-54 §§ 2.a, 5; 2059; 2061. The STP applicant must notify the state clearinghouse and any affected regional clearinghouse, which in turn may notify interested local, regional, or state agencies. *Id.* at 2053 §§ 2.a, 4.a. The clearinghouse may conduct its own review of the application, *id.* at 2054 § 4.f.1, or facilitate consultations between the applicant and interested local governments or agencies, *id.* at 2053 § 4.a. The applicant must submit all comments and recommendations made by or through the clearinghouse as well as a statement that the comments were considered. *Id.* at 2054 § 4.f. See generally OMB, Circular No. A-95: What It Is—How It Works, A Handbook 8-32 (July 1, 1976) [hereinafter cited as A-95 Explanation].

103. 1 Interceptor Sewers, *supra* note 26, at 61.

104. See 2 *id.* at 19 (Staten Island, N.Y.) (A-95 agency approved sewer project "enthusiastically" without any comment on land-use implications), 119 (Fulton County, Ga.) (project requests immediately approved by A-95 agency, apparently without detailed review), 148 (DeSoto County, Miss.; Shelby County, Tenn.) (potentially influential A-95 agency had not assumed an active role in either projecting or planning for future population or land use), 177 (Southaven, Miss.) (A-95 agency was not active in land-use planning and routinely approves construction grant requests supported by county planning commission). The A-95 regional clearinghouse also gives notice to local governments and to interested local and regional agencies. See note 101 *supra*. At least one A-95 regional clearinghouse commonly received no comments from these agencies on sewer projects. 2 Interceptor Sewers, *supra* note 26, at 236 (St. Bernard Parish, La.).

105. The federal government does not provide direct financial assistance for A-95 review. A-95 Explanation, *supra* note 102, at 29. According to the OMB, funds for A-95 review come primarily from state and local sources. *Id.* at 30. Regional clearinghouse coordinators are in agreement that inadequate funding of A-95 clearinghouses is one explanation for the cursory review often given to project applications. Telephone Interview with Tracie Baker, Former Planning Ass't., Central Naugatuck Valley, Conn., Regional Planning Agency (Oct. 5, 1976) (notes on file with *Yale Law Journal*) [hereinafter cited as Baker Interview]; Telephone Interview with Stan Greimann, Director, Conn. River Estuary Regional Planning Agency (Oct. 4, 1976) (notes on file with *Yale Law Journal*) [hereinafter cited as Greimann Interview]; Telephone Interview with Donald Peabody, Deputy Director, Regional Planning Agency of South Central Conn. (Oct. 6, 1976) (notes on file with *Yale Law Journal*) [hereinafter cited as Peabody Interview].

ities would place the clearinghouse at odds with a constituent local government.¹⁰⁶

Even if A-95 review were properly performed, it is not clear that it would affect Title II planning. The IGCA instructs the EPA Administrator to make "reasoned choices" between conflicting objectives;¹⁰⁷ accordingly, the Administrator must determine whether modification of a treatment works project to accord with local growth planning is consistent with the 1972 FWPCA's water quality objective. This determination may give undue weight to functional goals.¹⁰⁸ For example, one clearinghouse reports that all but one of the projects receiving adverse comments in its region were eventually funded without modification.¹⁰⁹ And in Fulton County, Georgia, one reviewing agency's comment that inadequate attention had been given to a proposed interceptor's growth impacts apparently had no effect on the EPA's ultimate decision to fund the project.¹¹⁰ In sum, A-95 appears to offer only the possibility, not the assurance, that projects funded by Title II will be designed in coordination with local growth desires.¹¹¹

106. Greimann Interview, *supra* note 105; Telephone Interview with William Minor, former Senior Regional Planner, Greater Bridgeport Regional Planning Agency (Oct. 7, 1976) (notes on file with *Yale Law Journal*). One Connecticut clearinghouse's efforts to ensure the conformity of construction grant applications with its regional development plan produced mixed results. One local applicant modified its facilities plan apparently to conform to regional objectives; another persuaded the clearinghouse to endorse its application by documenting the need for the project's nonconforming elements. Baker Interview, *supra* note 105.

107. 42 U.S.C. § 4231(a) (1970).

108. Although the Administrator's determination is presumably reviewable in the courts, litigation under the IGCA may present difficulties. See note 178 *infra*.

109. Peabody Interview, *supra* note 105; see 1 Interceptor Sewers, *supra* note 26, at 62 (A-95 review appears "to afford local planning agencies little opportunity to influence the design of most sewer interceptor projects.")

110. See 1 Interceptor Sewers, *supra* note 26, at 62.

111. The OMB, responsible for implementing A-95 review, observes that "A-95 cannot assure coordination, but it is designed to create a climate for intergovernmental cooperation in which such coordination is more likely to come about." A-95 Explanation, *supra* note 102, at 4 (emphasis in original). OMB describes A-95's premises as follows:

- Fundamental to coordination is communication; therefore,
- If people who *should* be talking to each other are put in a position of *having to* talk to each other, then
- They *may* come to identify and understand their communities of interest and areas of conflict; and, if they do, then
- They *may* cooperate in pursuit of their common interests and try to negotiate their differences;
- To the extent that they do, federally assisted programs and projects are more likely to be better coordinated, resulting in dollar savings, better projects and more value for public investment.

Id. (emphasis in original).

A-95 review initially showed promise for influencing federal decisionmaking. In Berlin, Connecticut, for example, an application for a pre-1972 FWPCA sewer construction grant

3. NEPA

The National Environmental Policy Act of 1969 (NEPA)¹¹² is interpreted to mandate environmental planning for federal programs,¹¹³ including the Title II construction grants program.¹¹⁴ It therefore presents still another opportunity for comprehensiveness.

NEPA requires federal agencies undertaking major actions to consider environmental impacts in weighing the costs and benefits of their decisions.¹¹⁵ Thus when a locality applies for a construction grant, the EPA, as the responsible federal agency, must weigh the environmental costs of funding the applicant's waste treatment project. The agency implements this mandate by requiring construction grant applicants to conduct an "environmental assessment."¹¹⁶ If, after review of the assessment, the EPA determines that environmental impacts will not be significant, the agency issues a "negative declaration" and the construction grant application can be approved.¹¹⁷ However, if environmental impacts will be significant, the EPA must prepare an environmental impact statement (EIS),¹¹⁸ which by regulation must

was modified after the Central Connecticut Regional Development Agency created adverse publicity by commenting through A-95 that the town's zoning ordinance was exclusionary. See Myhra, *A-95 Review and the Urban Planning Process*, 50 J. URB. L. 449, 457-59 (1973). One commentator concluded: "A-95 holds the possibility of revolutionizing planning; to the extent the planner controls resources, he is a viable member of the power structure." *Id.* at 451.

However, A-95 review has not received universal accolades. See, e.g., 1 U.S. ADVISORY COMM'N ON INTERGOVERNMENTAL RELATIONS, REGIONAL DECISION MAKING: NEW STRATEGIES FOR SUBSTATE DISTRICTS 164 (1973) [hereinafter cited as REGIONAL DECISION MAKING] (A-95 review lacks impact because process is voluntary, sanctionless, and advisory); Riley, *New Directions in Federal Land Use Legislation*, 1973 URB. L. ANN. 29, 42 ("Comments are made, papers generated, and circulars and regulations complied with, yet close observers of the process do not believe that planning in most areas is particularly comprehensive.")

112. 42 U.S.C. §§ 4321-4395 (1970 & Supp. V 1975).

113. See *id.* § 4331(b) (1970); *Environmental Defense Fund, Inc. v. Corps of Engineers*, 470 F.2d 289, 295 (8th Cir. 1972), *cert. denied*, 412 U.S. 931 (1973); *Calvert Cliffs' Coordinating Comm. v. AEC*, 449 F.2d 1109, 1111-12 (D.C. Cir. 1971).

114. 33 U.S.C. § 1371(c)(1) (Supp. V 1975).

115. See 42 U.S.C. §§ 4331(b), 4332(2)(C) (1970 & Supp. V 1975); *Calvert Cliffs' Coordinating Comm. v. AEC*, 449 F.2d 1109, 1113 (D.C. Cir. 1971).

116. See 40 C.F.R. § 6.104(b), .202, .512(a) (1976).

The EPA has divided the construction grant application process into three planning steps. *Id.* § 35.930-1(a). First, the applicant must demonstrate the need for the proposed project and analyze and evaluate feasible alternatives for achieving water quality objectives. *Id.* § 35.917(b). At this step the environmental assessment is made, analyzing secondary environmental impacts such as growth induced by the project. *Id.* § 35.917-1(d)(7); Guidance, *supra* note 23, at 11-12. The project proceeds to Step Two if a negative declaration is issued or a final EIS is completed. In Step Two construction plans and specifications are prepared. 40 C.F.R. § 35.930-1(a)(2) (1976). Finally, in Step Three the applicant is awarded the bulk of construction grant assistance for erection and completion of the project. *Id.* § 35.930-1(a)(3).

117. See 40 C.F.R. § 6.104(e), .212(a), .512(g) (1976).

118. 42 U.S.C. § 4332(2)(C) (1970 & Supp. V 1975); 40 C.F.R. § 6.104(d), .206(a)(1) (1976).

take into account growth impacts.¹¹⁹ Hence, the EIS is the key procedural requirement by which detailed analysis of adverse growth impacts is incorporated into treatment works planning.

The EIS process has played an important role in the design of some treatment works projects. On occasion it has resulted in the alteration of an applicant's plans because part of the proposed project was not found to be justified.¹²⁰ Other times it has required changes in design to mitigate adverse environmental impacts.¹²¹ In most cases, however, impact statements are not prepared for construction grant applications. In EPA Region III, for instance, only 14 EISs have been initiated or completed.¹²² A major reason appears to be the EPA's lack of manpower.¹²³ For most projects, analysis of environmental impacts is limited to the applicant's preparation of an abbreviated EIS—the environmental assessment.¹²⁴ Such assessments are prepared by parties—the applicant and its consulting engineer—who are presumably interested in the expeditious processing of the application.¹²⁵

In particular, an EIS must be prepared whenever a treatment works project will induce "significant" changes in land-use patterns as measured by such factors as increased development pressure on vacant lands, "faster" growth rates, changes in population density, and the potential effects of land-use regulations on development. *Id.* § 6.510(a).

119. 40 C.F.R. § 6.512(a)(5) (1976) (for waste treatment system construction, "[s]pecial attention should be given to . . . induced changes in population patterns and growth").

120. *E.g.*, Bloomington EIS, *supra* note 48, at 5-1 (extension of interceptor sewer to recreational lake area not cost effective); Bay to Bay EIS, *supra* note 24, at i (no demonstrated need for Title II funding).

121. See note 65 *supra* (Ocean County); 2 Interceptor Sewers, *supra* note 26, at 119-20 (change in interceptor route made to avoid destruction of recreational and scenic areas).

122. Torok Interview, *supra* note 64.

123. See 1975 Hearings, *supra* note 9, at 161 (in fiscal 1976 EPA had sufficient funds to prepare EISs for only five percent of all construction grant applications); N.Y. Times, Jan. 21, 1977, § 1, at 16, col. 1 (interview with former EPA Administrator Train) (inadequate staffing for all EPA programs); EPA Evaluation, *supra* note 50, at 30-31. Controversy appears to be a significant factor in the EPA's determination that an EIS is required. See 40 C.F.R. § 6.200(b) (1976); 1975 Hearings, *supra* note 9, at 159 (Clem Rastatter, sr. assoc., Conservation Foundation) (telephone survey found that seven regional officers prepared an EIS only when significant controversy existed).

124. Compare 40 C.F.R. § 6.512(a) (1976) (requirements for environmental assessment of treatment works projects) with *id.* §§ 6.514, 6.304 (requirements for treatment works project EIS).

125. One environmentalist warns of the danger of a burgeoning "sewage-industrial complex" of land developers, contractors, sanitary engineers, and state and local officials, who plan waste treatment systems without regard to environmental constraints or values. See 1975 Hearings, *supra* note 9, at 123 (Gus Speth, Natural Resources Defense Council).

"Piggybacking" has been suggested as one alternative to current EIS procedures. Under this proposal, if the Regional Administrator determines that an EIS is necessary, the EPA would work with an applicant's consulting engineer to prepare a joint environmental assessment and impact statement. See EPA, Program Guidance Memorandum [No.] 58 (Sept. 8, 1975) (on file with *Yale Law Journal*). Presumably, this would expedite EIS preparation and prevent duplication of effort. However, piggybacking might also compromise the independence of the EPA's review of construction grant applications.

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Not surprisingly, the procedure often proves inadequate.¹²⁶ One study concluded that environmental assessments "glossed over" growth impacts and that the EPA appeared "to go to lengths to render a declaration of negative assessment."¹²⁷

Even when a full EIS is prepared, it may not lead to comprehensive planning of sewerage systems. The EPA's measurement of environmental costs and benefits may reflect the Act's explicit declaration that clean water is the major environmental objective. The Administrator's balancing process may be illustrated hypothetically. Assume that an interceptor sewer would produce \$1,000 in water quality benefits and would cost \$100 for construction, \$800 in growth impacts adverse to local objectives,¹²⁸ and \$200 for the destruction of a wild-life habitat through which the sewer would pass.¹²⁹ Assume further that the Administrator chose to reroute the interceptor sewer to avoid the preserve. He might thereby justify funding the project because its benefits would outweigh its costs.¹³⁰ NEPA does not require him to

126. See 1975 Hearings, *supra* note 9, at 158 (Clem Rastatter, sr. assoc., Conservation Foundation) (not one of 43 projects studied by EPA in which negative declarations were issued had adequate documentation); 2 Interceptor Sewers, *supra* note 26, at 181-82 (Southaven, Miss.) (EPA accepted consulting engineer's land-use and population projections as well as engineer's conclusion that interceptor sewer would not have significant environmental impact even though environmental assessment made no mention of adverse secondary impacts), 268-70 (Tulsa-Broken Arrow, Okla.) (with exception of primary impacts, land-use considerations were not analyzed by consulting engineer for interceptor sewer project; however, because of immediacy of pollution problem in area to be seweraged, EPA approved project).

127. See 1 Interceptor Sewers, *supra* note 26, at 67-68.

128. Examples of readily measured growth impacts that are adverse to localities abound: e.g., the cost of building new classrooms or roads.

129. A similar example can be found in Note, *The National Environmental Policy Act of 1969: Toward a Substantive Standard of Review*, 4 N.Y.U. REV. L. & SOC. CHANGE 153, 168-74 (1974).

130. Several EISs demonstrate that the EPA will fund projects although cognizant of significant adverse growth impacts. See Scarborough EIS, *supra* note 27, at VI-1 (estimated growth attributable to proposed sewer system would be "sufficient to have possible socioeconomic consequences but not so large as to affect the natural environment"); EPA Region IV, Final Environmental Impact Statement, North Fulton County, Georgia, WPC-GA 189, and Northeast Cobb County, Georgia, WPC-GA 173, at 60-61 (Jan. 1974), *quoted in* 1 Interceptor Sewers, *supra* note 26, at 65 ("The EPA does not have the authority to limit land development, [or] dictate the type of land developments The mitigating measures of land use control and public services must be provided by the local governments. The EPA realizes that sewers can support development and that some adverse effects can occur . . . [.] In spite of the possible adverse effects and difficulty in calculating these effects, EPA will propose to approve some projects."); Winnepesaukee EIS, *supra* note 27, at IV-50 (recommends project that would "induce growth" and thereby create potential for "significant adverse impacts upon both natural and man-made environments"); Valley Forge EIS, *supra* note 27, at V-25 (recommends regional sewer project that would create the potential for an "undesirable future environment in terms of land use").

If a treatment works project will engender substantial growth costs but achieve water quality benefits, it does not appear likely that the Administrator will be reversed in

minimize adverse growth impacts while meeting the 1972 FWPCA objective.

III. Regional Comprehensive Planning of Treatment Works Projects

The observed deficiencies of § 208, A-95 review and NEPA—in-sufficient funding, neglect on the part of localities, and functionalism in the administration of the 1972 FWPCA—indicate the inadequacy of this tripartite planning structure in realizing the growth-guidance potential of waste treatment projects funded under Title II. The need for a fresh approach to the planning of sewer design seems evident.

A. *Comprehensive Planning*

The foundation for a new approach should be comprehensive planning, *i.e.*, planning aimed at coordinating locally determined growth objectives with the growth impacts of functional development pro-

the courts. The standard of review appears only to be whether or not his decision to fund a project was arbitrary or clearly erroneous. *See* Environmental Defense Fund, Inc. v. Corps of Engineers, 492 F.2d 1123, 1139-40 (5th Cir. 1974) (NEPA permits "meaningful, albeit limited," judicial review under Administrative Procedure Act, 5 U.S.C. § 702 (1970)); Conservation Council v. Froehlke, 473 F.2d 664, 665 (4th Cir. 1973) (*per curiam*) (judicial review under NEPA is limited to determining whether agency reached its decision after full, good faith consideration of environmental factors; and whether actual balance of costs and benefits was arbitrary or clearly gave insufficient weight to environmental factors); Environmental Defense Fund, Inc. v. Corps of Engineers, 470 F.2d 289, 300 (8th Cir. 1972), *cert. denied*, 412 U.S. 931 (1973) (review is to determine that decision is not arbitrary, does not fail to consider relevant factors, and is not clear error of judgment); Calvert Cliffs' Coordinating Comm. v. AEC, 449 F.2d 1109, 1115 (D.C. Cir. 1971) (reviewing courts "probably cannot reverse a substantive agency decision on its merits" unless actual balance of costs and benefits shown to be arbitrary or to have clearly given insufficient weight to environmental factors). Indeed, one circuit has held that NEPA review is purely procedural. *Environmental Defense Fund, Inc. v. Armstrong*, 487 F.2d 814 (9th Cir. 1973), *cert. denied*, 416 U.S. 974 (1974). *Cf.* *National Helium Corp. v. Morton*, 455 F.2d 650, 656 (10th Cir. 1971) (purposes of NEPA are realized by compelling agencies to follow NEPA procedures).

Even if a court could review substantive agency decisions by making its own determination as to the balance of costs and benefits, it is questionable whether the lengthy and expensive process of judicial review would be a desirable means of coordinating water pollution abatement with growth planning. *See* B. ACKERMAN & S. ROSE-ACKERMAN, J. SAWYER, D. HENDERSON, *THE UNCERTAIN SEARCH FOR ENVIRONMENTAL QUALITY* 151-54 (1974) [hereinafter cited as ACKERMAN]. One commentator has argued that "active" judicial review of a federal agency's substantive decision is appropriate when the judgment of the responsible agency and the judgment of environmentally oriented agencies differ. *See* Note, *supra* note 129, at 174. For sewer construction, however, the EPA wears both hats; thus, a judge is likely to defer to its expertise in balancing water quality benefits against growth costs.

grams such as Title II.¹³¹ The keystone of such coordination would be a "comprehensive plan."¹³² Typically, a planner begins with a locality's plan for growth and its land-use controls, such as zoning. Taken together, they provide an important indication of a community's development objectives.¹³³ The pattern of growth that emerges be-

131. Congress's program to assist comprehensive planning, 40 U.S.C. § 461 (Supp. V 1975), defines "comprehensive planning" to include the following activities:

(A) preparation . . . of general plans with respect to (i) . . . land use, (ii) the provision of public facilities . . . and other government services, and (iii) the . . . development and utilization of human and natural resources;

(B) identification and evaluation of area needs (including housing, employment, education, and health) and formulation of . . . programs for meeting [these] needs . . . ;

....

(E) programming of capital improvements and other major expenditures . . . ;

(F) coordination of . . . plans and activities of the State and local governments with agencies concerned; and

(G) preparation of regulatory and administrative measures in support of the foregoing.

Id. § 461(m)(4). Comprehensive planning has been described as a "prerequisite for the provision of a suitable living environment for every American family." H.R. REP. NO. 1585, 90th Cong., 2d Sess. 57 (1968), *reprinted in* [1968] U.S. CODE CONG. & AD. NEWS 2873, 2931.

The use of the term "comprehensive" in this Note should be distinguished from the 1972 FWPCA's reference to "comprehensive programs" designed to ensure that all possible approaches will be taken to achieve the Act's functional objective. *See* 33 U.S.C. § 1252(a) (Supp. V 1975) ("Administrator shall . . . develop comprehensive programs for preventing, reducing, or eliminating . . . [water] pollution").

132. A comprehensive plan can take many forms. It may articulate an area's growth goals or ideal pattern of future development. It may delineate interim goals and specific implementation actions. It may establish policies that control comprehensive planning activities. A comprehensive plan often includes an inventory and maps of an area's existing land use, natural resources, demography, and economy. Moreover, it may include a map that lays out a desired growth pattern for an area. *See generally*, Haar, *The Master Plan: An Impermanent Constitution*, 20 LAW & CONTEMP. PROB. 353 (1955); Winnepesaukee EIS, *supra* note 27, at III-7 to III-8. The general use of "comprehensive plan" in this Note should be distinguished from its legal connotation as a zoning term of art. *See* ADVISORY COMM. ON CITY PLANNING & ZONING, DEP'T OF COMMERCE, STANDARD CITY PLANNING ENABLING ACT (1928); ADVISORY COMM. ON ZONING, DEP'T OF COMMERCE, STANDARD STATE ZONING ENABLING ACT § 3 (rev. ed. 1926). For a discussion of the changing role of the comprehensive plan in zoning, *see* Mandelker, *supra* note 94.

133. The EPA also looks to these documents in reviewing a construction grant applicant's calculation of reserve capacity. *See* note 27 *supra*. However, its perspective is functional: the agency's concern is to determine the maximum level of development that a locality's land controls allow. Obviously, the EPA would be reluctant to fund reserve capacity in excess of that development level, since the result would be to expend limited resources on a project that may never be fully utilized. *See id.* For the comprehensive planner, land-development controls give direction to his work. Waste treatment systems are designed in order to reinforce the growth objectives of local plans and ordinances.

To see this distinction, it is helpful to consider a hypothetical case. A locality may prefer to accommodate growth in neighborhood *A* as opposed to *B*. To accomplish this, it might zone *B* for 10-acre lots and *A* for quarter-acre lots. Developers are more likely to build homes in neighborhood *A* since few consumers can afford 10-acre homesites. However, in some jurisdictions zoning neighborhood *B* for 10-acre lots may constitute a taking of private property without just compensation. *See* Ellickson, *supra* note 59, at

comes the comprehensive planner's atlas and constitution: development infrastructure is designed consistently with and in furtherance of the community's growth goals. For example, treatment works for planned-growth areas would be sized according to the extent of development desired; projects for areas not planned to grow would be designed without reserve capacity.¹³⁴ Planning of other community facilities would also be geared to development goals to ensure that such basic services as schools, roads, and utility lines are available to serve the growth induced by construction of a waste treatment system.¹³⁵ Similarly, if regionalization of waste treatment would require that interceptor sewers traverse vacant lands, the comprehensive planner might determine to build smaller STPs in each polluted area.¹³⁶ Or if limited funds would necessitate some centralization, interceptor sewers might be routed circuitously so as to link polluted areas without invading undeveloped lands.

Admittedly, comprehensive planning does not take place in a functional vacuum. Federal laws and funding policies may constrain the ability of the planner to use infrastructural growth-guidance tools.¹³⁷ For instance, if Title II resources are sufficient only to fund construction of one STP in an area plagued by severe water pollution, and a locality cannot afford to build a second STP in another locale planned

505 nn.398-401. The locality thus may have no option but to zone for more intensive development—e.g., two-acre lots. In calculating wastewater flows the EPA is likely to take into account the full development potential of neighborhood *B*. See note 27 *supra*. The agency might therefore conclude that an interceptor sewer should be built to neighborhood *B* with sufficient reserve capacity to serve homes on all of the area's two-acre lots. In contrast, the comprehensive planner, while acknowledging that *B* might eventually be developed, would recognize the preference for growth in neighborhood *A* inherent in the locality's zoning scheme. Thus, he might conclude that an interceptor should not be extended immediately to neighborhood *B*. To prevent the development of *B*, he might also recommend that neighborhood *A* be rezoned for garden apartments in order to accommodate the locality's growth without opening up neighborhood *B*.

134. In some jurisdictions a municipality's refusal to extend sewers to an area not planned for growth may be an unconstitutional taking of a landowner's property without just compensation. See Ellickson, *supra* note 59, at 502-03 & nn.386, 387, 389 & 390. Where such refusals do not constitute takings, however, a municipality may limit an area's growth without having to resort to arguably unconstitutional devices—e.g., the zoning of an area for limited growth that substantially reduces a landowner's property value. See *id.*

135. The converse is equally true. Although waste treatment investments have become the prime determinant of development patterns, investment in other public utilities may also induce growth that the comprehensive planner must take into account in designing treatment works systems. For a discussion of development infrastructure, see CEQ, *supra* note 54, at 36-44; GROWTH SHAPERS, *supra* note 34, at 48-57; and Draft Livermore EIS, *supra* note 38, at 4-46 to 4-47.

136. Less centralized alternatives are not always more costly than the regionalized projects recommended by the EPA. See pp. 779-80 & note 212 *infra*.

137. See generally COMM. ON COMMUNITY DEVELOPMENT, *supra* note 51, at 43-61.

to accommodate growth, the comprehensive planner may have no option but to provide reserve capacity in the polluted area's STP even though growth has not been planned there.

Nonetheless, the recognition that comprehensive planning must coordinate local development plans with the 1972 FWPCA's pollution abatement objective does not render growth guidance infeasible. So long as a treatment works project is compatible with the Act's objective, the comprehensive planner can design projects according to a municipality's development objectives. For example, he might adjust the priority of STP or interceptor sewer construction in accordance with local objectives provided that such facilities were made available to all polluted areas in time to meet the 1972 FWPCA's deadlines. Priority for construction could therefore be given from the start to an unpolluted area planned for growth in order to ensure that development would be guided there.¹³⁸ Thus the role of the comprehensive planner is to minimize the adverse impacts of public facilities needed to meet functional objectives while maximizing the facilities' beneficial impacts. This calculation may be sharply contrasted with the functional approach of maximizing the degree of water pollution abatement per dollar of expenditure.¹³⁹

B. Regionalism

Comprehensive planning of sewerage systems must be done on the regional or intermunicipal level to respond efficiently to both national pollution and local growth objectives. The need for regional sewer planning is clearly recognized by Title II requirements mandating § 208 areawide planning.¹⁴⁰ It is further reflected in the federal

138. At present, an unpolluted area is not likely to receive priority for construction grants. See pp. 742-43 & note 45 *supra*.

139. Cost Effectiveness, *supra* note 65, at 1.

It is not asserted, however, that the EPA is always preoccupied with functional concerns. For instance, in Aspen, Colorado, the agency decided to fund a project designed according to Aspen's development objective to curtail growth in the city and to facilitate it in a recently developed ski area nearby. The EPA explained its decision by noting the lack of adequate population projections for the Aspen region. EPA Region VIII, Final Environmental Impact Statement, Aspen Metro Sanitation District/Snowmass Water & Sanitation District [Colorado], 201 Wastewater Facilities Plans 50-52, 96-97 (1976). As seen, the EPA has also conditioned construction grants on the preparation of land-use plans by the applicant localities. See p. 746 *supra*. This latter device may have desirable planning consequences. But it also appears to place the cart before the horse: having made decisions as to reserve capacity and interceptor location that will influence the pattern of future development, the EPA has then mandated comprehensive planning. Thus the comprehensive planning that the EPA has required is reactive; it does not influence the placement or capacity of the sewerage system.

140. See 33 U.S.C. §§ 1251(a)(5), 1281(c), 1288 (Supp. V 1975) (national policy that areawide waste treatment management planning processes be developed).

intergovernmental cooperation policy requiring that federal development programs coordinate with subfederal comprehensive planning.¹⁴¹

The potential benefits of comprehensive planning on a regional level are clear.¹⁴² Regional planning of waste treatment management may produce economies of scale. As Congress recognized when enacting § 208, regional planning prevents unnecessary municipal investment in waste treatment systems.¹⁴³ The EPA, for example, has often recommended the construction of a central STP as less expensive than several STPs for different communities within a region.¹⁴⁴ Even where the capital construction costs of a single STP are greater than the costs of building several smaller plants, the operating and maintenance costs of a centralized system may generate sufficient savings to produce net economies of scale for a locality.¹⁴⁵

Regional planning may also help mitigate the harmful externalities of treatment works construction imposed by a municipality on the region.¹⁴⁶ Cooperative planning of projects at the regional level could facilitate discovery of potential interjurisdictional spillovers and thus provide an opportunity to plan treatment works projects so as to minimize adverse growth impacts on neighboring municipalities.¹⁴⁷

141. 42 U.S.C. § 4231(c) (1970).

142. For two accounts of the development of regional planning, see REGIONAL DECISION MAKING, *supra* note 111, at 2-15; Freilich & Ragsdale, *Timing and Sequential Controls—The Essential Basis for Effective Regional Planning: An Analysis of the New Directions for Land Use Control in the Minneapolis—St. Paul Metropolitan Region*, 58 MINN. L. REV. 1009, 1024-33 (1974).

143. See S. REP. NO. 414, 92d Cong., 1st Sess. 37-38 (1971), reprinted in [1971] U.S. CODE CONG. & AD. NEWS 3668, 3704.

144. *E.g.*, Greeley EIS, *supra* note 47, at 152 (construction of single STP has advantages of economies of scale and efficient operation and maintenance); see *Water Pollution Control Programs: Hearings Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works*, 92d Cong., 1st Sess. 15 (1971) (average per-household construction cost of waste treatment plants varies from \$400.94 for system with 1,000 homes to \$90.27 for system with 125,000 homes).

145. See, *e.g.*, Scarborough EIS, *supra* note 27, at III-3.

146. For instance, limiting the size of waste treatment facilities in one municipality might shift development pressures to another town. See, *e.g.*, p. 742 *supra*. Similarly, construction of a large-capacity interceptor to the border of one growth-minded municipality might stimulate unwanted development in an adjacent community that had zoned its border area for slow growth. The proximity of new development might reduce the attractiveness of the slow-growth neighborhood as a result of increased congestion on roads connecting the two areas or the aesthetic pollution caused by the construction of shopping centers, apartment complexes, and fast-food restaurants just over the town line. Some landowners might sell to developers who anticipate the neighborhood's rezoning in light of its reduced attractiveness to families seeking quiet streets and green spaces. At the same time, the increased cost of road maintenance combined with a decline in land values (and hence the property tax base) would create pressures to permit development of the slow-growth area.

147. See, *e.g.*, Final Livermore EIS, *supra* note 48, at 6 (regional planning should be sensitive to fact that limiting growth in one municipality by building smaller waste treatment facilities will shift development pressures to other municipalities).

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Moreover, such intermunicipal cooperation could yield the added advantage of encouraging municipalities to identify common growth objectives. By promoting an areawide perspective, regional planning could help to replace the present patchwork of municipal zoning ordinances and plans with a coherent regional growth plan.¹⁴⁸

C. Regional Councils

The framework for more effective planning of waste treatment projects on a regional level already exists. With funding from the comprehensive planning program (701 program)¹⁴⁹ and other federal programs, several hundred organizations capable of comprehensive planning have been established by states or localities.¹⁵⁰ These organizations or "regional councils" have different names and purposes but all serve to bring together local governments in order to facilitate planning regarding issues of regional concern.¹⁵¹

Existing regional councils could perform comprehensive planning. According to a 1972 survey by the Advisory Commission on Intergovernmental Relations (ACIR), most regional councils already have

148. See, e.g., Winnepesaukee EIS, *supra* note 27, at III-10, III-12 (existing land-use controls represent patchwork of devices instituted to meet particular problems; development of town comprehensive plans and adoption of zoning classifications do not reflect intermunicipal coordination and cooperation); Valley Forge EIS, *supra* note 27, at III-39 to III-40 (county land-use plan is composite of disparate town plans; need for strong comprehensive county plan recognized).

149. 40 U.S.C. § 461 (Supp. V 1975). The program's name derives from its source: § 701 of the Housing Act of 1954, ch. 649, § 701, 68 Stat. 590, 640. The 701 program provides grants for up to two-thirds of the cost of comprehensive planning. Local, regional, and state agencies electing to participate in the 701 program receive assistance "in solving planning problems, including those resulting from the increasing concentration of population in . . . urban areas and the outmigration from and lack of coordinated development of resources and services in rural areas." 40 U.S.C. § 461(a) (Supp. V 1975).

150. See REGIONAL DECISION MAKING, *supra* note 111, at 343-44 (352 regional councils in operation in 1972).

151. See *id.* at 50-51, 80-82, 432. The Advisory Commission on Intergovernmental Relations defines a regional council as an organization of local governments established to foster cooperative approaches to matters of areawide concern. Its activities involve more than one policy or program area and its membership consists predominantly of elected officials or appointed representatives of constituent governments. See *id.* at 432. Typically, the councils have professional staffs. See *id.* at 92, 94 (Table III-15). They administer programs ranging from the planning of public facilities (e.g., sewers) to the provision of human services (e.g., senior citizen programs). See *id.* at 97 (Table III-19), 168-74.

Although regional councils are representative in the sense that they are controlled by local governments, representation is generally not based on population. The most common arrangement for council representation is for each member government to have a single vote. See *id.* at 82 (Table III-7). Relative voting strength has been cited by council members as a major issue confronting regional councils. See *id.* at 103 (Table III-25), 122, 124.

adopted land-use plans.¹⁵² Moreover, the 701 program requires its grantees to develop comprehensive plans with land-use elements by mid-1977.¹⁵³ Since their largest source of funding is provided by 701, regional councils are likely to develop the "studies, criteria, standards and implementing procedures" required by the program "for effectively guiding and controlling major decisions as to where growth shall take place."¹⁵⁴ Municipalities belonging to existing regional councils have found past council efforts at land-use and sewer planning worthwhile. The ACIR survey indicated that the municipalities gave some of their highest marks to such planning assistance.¹⁵⁵ Of course, such accolades do not suggest the absence of problems confronting regional councils.¹⁵⁶ Nonetheless, the regional council's 701 mandate and apparent potential for land-use and sewer planning suggest that further attention be given to regional councils as vehicles for comprehensive planning of waste treatment systems.

IV. Proposed Amendments to Title II

The preceding sections have noted the likelihood that Title II-assisted treatment works projects will have substantial impacts on the pattern of land development. They have also discussed the inability of the existing planning structure to respond effectively. It has been suggested that regional comprehensive planning of waste treatment systems may provide a remedy for both the functional orientation of the EPA and inadequate planning by localities. While § 208's enactment indicates a congressional commitment to planning waste treatment systems comprehensively, the section does not appear to go far

152. See *id.* at 96 (Table III-18) (83% of regional councils responding to Commission questionnaire had adopted land-use plan or policy).

153. 40 U.S.C. § 461(c), (d) (Supp. V 1975). Before 1974 a 701 recipient was required only to perform comprehensive planning within the Act's broad definition, see note 131 *supra*, of that term. In amending 701 to require land-use and housing elements, Congress expressed its concern that the plans and recommendations produced by 701 had not been implemented:

The [Banking, Housing and Urban Affairs] Committee has no desire to encourage planning as an academic exercise or to subsidize the production of "paper plans" which merely sit on library shelves. . . . It . . . recognizes that structural, political, or other obstacles may prevent plans from being successfully implemented. At the same time, however, it expects recipients to utilize planning as guidance for public action.

S. REP. NO. 693, 93d Cong., 2d Sess. 63 (1974), reprinted in [1974] U.S. CODE CONG. & AD. NEWS 4273, 4332.

154. 40 U.S.C. § 461(c)(2) (Supp. V 1975).

155. See REGIONAL DECISION MAKING, *supra* note 111, at 120.

156. See *id.* at 101-05, 122-24 (problems include allocation of voting strength, local opposition to regional government, and failure to implement plans).

enough towards affording sufficient design flexibility to localities. Amendment of Title II is required to ameliorate the existing double bind of functionalism and poor planning.

The CEQ and the EPA recognize the potential of Title II-funded treatment works construction to induce adverse growth impacts. Each has recommended revision of the construction grants program. Their proposals appear to reflect a concern that the 1972 FWPCA's generosity provides a financial incentive to build excessively large treatment facilities and to promote low-density development. The immediate cost to localities of permitting low-density (or "sprawl") development by extending interceptors outward to vacant lands is not significantly greater than if the sewers had been concentrated in already developed areas.¹⁵⁷

A. *The CEQ Proposal*

A 1974 study prepared for the CEQ reviewed 52 Title II-funded interceptor sewer projects and recommended: (1) that interceptor sewers, as a general rule, have a design period not greater than 25 years, and (2) that the EPA not fund interceptor sewers with capacity in excess of the pollution abatement needs in existence at the time an interceptor project is completed.¹⁵⁸ It is not clear whether the CEQ meant that either policy would be sufficient or that both should be adopted. The most plausible explanation appears to be that the CEQ would prefer that the EPA not fund any interceptor with more than a 25-year design period; for interceptors within this limit, it is suggested that the EPA fund 75% of only that portion of the project required to serve the existing population at the time the project is completed. Since projects are generally completed in five years,¹⁵⁹ the proposal's effect would be to limit the EPA's funding of excess capacity

157. For an analysis of the issues motivating the proposed revisions of the construction grants program, see 40 Fed. Reg. 23107, 23107-09 (1975) (EPA); and 1 Interceptor Sewers, *supra* note 26, at 86-94 (CEQ).

158. See 1 Interceptor Sewers, *supra* note 26, at 6-7, 87-94. The CEQ also recommended: (1) that more realistic standards be used to measure the wastewater generated "per capita per day"; (2) that population forecasting techniques be improved; (3) that consideration of sewer-induced growth impacts be a required part of environmental impact assessment; and (4) that public participation in sewer planning be increased by publicizing interceptor-induced community costs and benefits. *Id.* at 95-102. The EPA's evaluation of the CEQ interceptor sewer study generally agreed with these recommendations. It stated that the final two recommendations would be implemented by agency guidelines. See EPA Evaluation, *supra* note 50, at vi-vii. Such guidelines were issued several months later. See Guidance, *supra* note 23.

159. Interview with Kevin McSweeney, Chief, Connecticut-Rhode Island Design Section, EPA Region I, in Boston (June 7, 1976) (notes on file with *Yale Law Journal*).

in interceptors to accommodate only the first five years of growth. A locality would pay the full costs of providing additional pipe capacity and further pipe extensions.

According to the CEQ, this proposal has several advantages. First, it would give localities a "great incentive to consolidate future development within the existing community or in directly adjoining areas."¹⁶⁰ This would be likely to occur because it would be less expensive for localities desiring growth to enlarge pipes funded by the EPA in areas of existing pollution than to pay the entire cost of laying pipes in outlying vacant lands.¹⁶¹ Furthermore, the CEQ believes that its proposal will encourage localities "to plan conservatively for future growth"¹⁶² since there would be no federal assistance to build sewers to accommodate new development.

The CEQ proposal can be criticized on two grounds. First, the proposal would not lead to greater flexibility in planning sewer-induced growth impacts. Instead, by funding only existing pollution abatement needs, it would foster a more compact growth pattern in areas presently settled regardless of whether or not a locality planned such development. The proposal would thus tend to reinforce existing growth patterns.¹⁶³ In addition, by confining Title II funding to existing abatement needs, the CEQ proposal could jeopardize the attainment of pollution abatement goals. As the EPA points out, localities would find it expensive to fund interceptor capacity for

160. 1 Interceptor Sewers, *supra* note 26, at 89.

161. Consolidation of development adjacent to interceptors in existing polluted areas might require the locality to rezone the lands near the EPA-funded pipes to facilitate more intensive development, such as garden or high-rise apartments. The resulting growth pattern would have the effect of slowing the extension of the city limits outward and thereby would reduce other development costs, such as the extension of roads. Growth would thus be accommodated either in settled areas or, where no vacant lands are available, in areas immediately adjacent to settled areas. In the latter event, extension of interceptor sewers would be necessary, but the more intensive pattern of development would require shorter pipe extensions and thereby reduce the cost of construction to localities.

162. See 1 Interceptor Sewers, *supra* note 26, at 89. The statement suggests that, in deciding on a given waste treatment capacity, localities will be less prone to include a potentially growth-inducing margin of safety if they must bear the full cost of such insurance.

163. For example, it would be costly for the locality to guide growth to unsettled and unpolluted areas. The development of a new satellite community would require extension of interceptors from existing areas of pollution or construction of a separate STP and sewer system. In both cases the locality would pay the full costs of construction. In contrast, to rezone settled areas to accommodate further population growth would require a relatively small investment; it avoids the expense of additional excavations and pipe extensions.

future needs; hence, the projects likely to be built may be overloaded soon after completion.¹⁶⁴

B. *The EPA Response*

In 1975 the EPA responded to the CEQ with its own proposal. The EPA recommended: (1) reduction of the federal share of treatment works costs from 75% to as low as 55%, and (2) a statutory design period of 10 years for STPs and 20 years for interceptors.¹⁶⁵ Accordingly, the EPA would fund treatment works capacity beyond that needed to serve existing needs but would reduce total funding. Localities would therefore have a significant financial incentive to design less ambitious treatment works projects.

Two advantages of the EPA proposals are evident. First, by assisting localities in meeting future waste treatments needs, the proposal better accords with the 1972 FWPCA's objective to "restore *and maintain*" the integrity of the Nation's waters.¹⁶⁶ Second, because the EPA proposals apply to STPs (the CEQ's study was confined to interceptor sewers) localities would have a financial incentive not to overdesign STP capacity.¹⁶⁷

The EPA proposals, however, would not allow much flexibility in planning the size and location of treatment works in order to implement planned-growth objectives. Arguably, the financial incentive to design treatment works projects that reinforce existing growth patterns would be stronger than under the CEQ proposal, since the proposed reduction in funding would also apply to STPs.¹⁶⁸ Similarly, as compared to the CEQ proposal, the financial disincentive to municipal participation in the construction grants program caused by reduced funding would be exacerbated under the EPA proposals: even localities not expecting to grow would find treatment works construction to

164. See EPA Evaluation, *supra* note 50, at 24.

165. See 40 Fed. Reg. 23107, 23108-09 (1975). The EPA also proposed that the 1972 FWPCA be amended to limit construction grant assistance to STPs, interceptors, and collector sewers. See *id.* at 23109-11.

166. 33 U.S.C. § 1251(a) (Supp. V 1975) (emphasis added).

167. There is evidence that the EPA is refusing to fund STP projects that the agency finds unnecessarily large. See pp. 747-48 *supra*.

168. It should be noted that, in contrast to the CEQ's proposal, the EPA would continue to fund at least 55% of the costs of sewer extensions to areas expected to grow. However, this "subsidy" may be outweighed by the EPA's across-the-board reduction in funding that could double the localities' share. Moreover, although most states presently fund part of the local share of sewer construction costs, see note 18 *supra*, they might not subsidize the added costs incurred under the EPA amendments. Some localities' costs could more than triple. Hence, it is not entirely clear which proposal will place a greater burden on the applicant-locality.

be more expensive, perhaps prohibitively so for the nation's smaller, rural municipalities.¹⁶⁹

Although Title II has not been amended to reflect either proposal, the CEQ approach appears to be ascendant.¹⁷⁰ In some respects, the EPA has implemented the philosophy of the CEQ proposal by refusing to fund some of the reserve capacity requested in certain STP projects and by encouraging shorter design periods.¹⁷¹ Moreover, the agency has supported an amendment to the Act and proposed regulations that would shorten the design periods of, and eliminate funding of reserve capacity for, treatment works projects.¹⁷²

V. Comprehensive Approaches to Pollution Abatement

By increasing the cost to localities of providing for future growth, the CEQ and EPA proposals might succeed in promoting more conservative growth planning and in reducing suburban sprawl. However, by only modifying funding levels and existing requirements for reserve capacity, the proposed changes would tend to reinforce existing inflexibility in the construction grants program while curtailing municipal planning options. This approach is essentially negative. It does not attempt to take advantage of the benefits of regional comprehensive planning; nor does it afford applicants the option to use Title II-funded sewer construction as a means of implementing growth plans.

169. For smaller municipalities, treatment works construction may already be a significant financial burden despite federal assumption of 75% of the capital cost of construction. The town of Dunkirk, Ohio, with 350 property taxpayers, is faced with construction of a \$2-3 million STP. Transcript of "60 Minutes" at 12, 13-14 (May 2, 1976) (on file with *Yale Law Journal*). The village of Walton, New York, population 3,744, is building a \$9 million STP. The local share of construction costs has put Walton in debt for the first time and is almost certain to increase dramatically the village's annual budget of \$575,137. *Wall St. J.*, July 26, 1976, at 1, col. 1.

170. A proposal apparently identical to the CEQ plan has the support of one commentator. See Federman, *The 1972 Water Pollution Control Act: Unforeseen Implications for Land Use Planning*, 8 *URB. LAW* 140, 152-53 (1976).

171. See pp. 747-48 & note 30 *supra*; Cost Effectiveness, *supra* note 65, at 34-35 (in areas of rapid growth, shorter design periods may be appropriate). However, the EPA still questions whether it can require an earlier design year when analysis of a project's cost effectiveness dictates a longer period under the terms of the Act. See EPA Evaluation, *supra* note 50, at v.

172. See 122 *CONG. REC.* S2277-78 (daily ed. Feb. 25, 1976) (letter from then EPA Administrator Train supporting S. 3038, 94th Cong., 2d Sess. (1976)); 42 *Fed. Reg.* 6841, 6841-44 (1977); note 30 *supra*. S. 3038 would have limited funding for reserve capacity to that required to serve users "expected to exist within the service area of the project at the time it becomes operational." 122 *CONG. REC.* S2278 (daily ed. Feb. 25, 1976).

A. *Amending Title II to Require Comprehensive Planning*

An expeditious means of using Title II-funded sewer construction to guide growth would be to amend the Title to ensure that grants for treatment works construction are compatible with duly adopted regional growth plans to the maximum extent possible.¹⁷³ Since under the 1972 FWPCA three agencies have input into the final funding decision,¹⁷⁴ several amendments to Title II would be necessary to ensure effective coordination. First, § 204(a)¹⁷⁵ could require that the EPA make a determination of compatibility before approving treatment works grants. Furthermore, § 208(b)(3)¹⁷⁶ could be amended to mandate that, before a § 208 plan is submitted for the Administrator's approval, the Governor certify that the plan is compatible with applicable regional growth plans. Finally, § 303(e)(3)(H)¹⁷⁷ could be amended to require that a state's ranking of treatment works priorities be coordinated insofar as possible with the priorities of regional growth plans.

The effect of these amendments would be to place an affirmative duty on the EPA Administrator, § 208 agencies, and state water pollution control programs to coordinate pollution abatement with regional growth planning. This duty would require more than disclosure of potential adverse impacts on growth; the various agencies would be obligated to adjust the design of proposed treatment works so as to implement regional plans in cases in which such construction

173. Since an area might have more than one regional planning agency, it would be necessary to define "regional growth plan." See p. 774 & note 185 *infra* (discussion of two factors that might help EPA select appropriate plan).

174. The agencies involved in approving treatment works projects are the EPA, the § 208 waste treatment management planning agency, and the state water pollution control agency. See 33 U.S.C. §§ 1284(a), 1313(e) (Supp. V 1975). When a § 208 region is not designated, the latter agency would likely have responsibility for waste treatment management planning as well. See note 87 *supra*.

175. 33 U.S.C. § 1284(a) (Supp. V 1975). Section 204 requires that before the Administrator approve a treatment works grant he determine (1) that the project is included in applicable § 208 and state water-quality plans; (2) that it is cost effective; (3) that it is certified by the state water pollution control agency as entitled to priority over other planned works; (4) that project specifications for construction bids will not be written so as to contain proprietary, exclusionary, or discriminatory requirements; and (5) that the applicant will be able to pay the local share of construction costs and adequately provide for the treatment works' operation and maintenance.

176. *Id.* § 1288(b)(3). The subsection provides that § 208 plans be certified annually by the Governor as consistent with river-basin plans and submitted to the EPA Administrator for approval. River-basin commissions are designated by the President, *id.* § 1289, and authorized to prepare a plan for the development of water and related resources in the basin, 42 U.S.C. § 1962b-3(3) (1970).

177. 33 U.S.C. § 1313(e)(3)(H) (Supp. V 1975) (requiring states to prepare plan, consistent with the 1972 FWPCA's deadline, that contains an inventory and ranking, in order of priority, of needed treatment works projects).

is compatible with water quality objectives.¹⁷⁸ Aside from providing Title II agencies with a clear mandate to take account of regional growth plans in designing treatment works projects, the amendments, if adopted, would have the added advantage of immediate implementation since they would not alter the basic structure of the construction grants program.

This proposal's efficacy may be undermined, however, by two considerations. First, in some regions there may not be an adopted growth plan;¹⁷⁹ or if a plan has been adopted, it may be inadequate.¹⁸⁰ In such regions, the necessary guidance for determining the size, location, and priority of treatment works projects obviously would not be available. Nonetheless, the more influential role of the growth plan

178. Since the IGCA, described at p. 754 *supra*, requires the EPA Administrator to coordinate the construction grants program with nonfederal comprehensive planning, see 42 U.S.C. § 4231(c), (e) (1970), it is necessary to spell out the differences between A-95 review and the amendments suggested here. First, the mandate to coordinate water pollution abatement with comprehensive planning would be extended to the priority system developed by state water pollution control agencies. See pp. 742-43 *supra*. A second difference is that the IGCA does not provide for citizens' suits, while under the 1972 FWPCA citizens have direct access to the federal district courts. To date, apparently, no suit has been brought against agency administrators for violation of the IGCA's policies. The proposed amendment to § 204(a) would ensure that citizens could bring suit against the Administrator to require him to perform his nondiscretionary duty to determine a plan's compatibility with adopted regional growth plans. Compare 42 U.S.C. §§ 4201-4244 (1970) with 33 U.S.C. § 1365(a)(2) (Supp. V 1975). Third, under the proposed amendment to § 204(a), if the regional growth-planning agency failed to file A-95 comments, or filed comments that did not adequately consider the proposed sewer project's compatibility with the regional plan, the EPA Administrator would be obligated to review the plan himself to make the compatibility determination. However, under the A-95 Project Notification and Review System, the Administrator's duty is limited to providing the clearinghouse with notice of the action taken on an application and, when a clearinghouse has recommended substantive changes or nonapproval of an application, an explanation of the decision made. See 41 Fed. Reg. 2052, 2054 ¶ 6d (1976). Therefore, it is not clear what can be accomplished by a suit against the Administrator under A-95, particularly when regional clearinghouses fail to establish adequate procedures for implementing A-95 or fail to notify regional planning agencies with interest in particular treatment works projects.

If adopted, the proposed amendments would admittedly be a modest reform. Essentially, they would resolve any doubts regarding the duty of water pollution control agencies to implement regional growth plans whenever possible and regarding the right of citizens to bring suits to enforce this duty.

179. See, e.g., Winnepesaukee EIS, *supra* note 27, at III-7 (regional planning commission had not yet adopted development plan, only statement of land-use objectives).

180. See Valley Forge EIS, *supra* note 27, at III-39 to III-41 (although county land-use commission had adopted land-use policy, its land-use plan was composite of municipal plans).

If a stronger incentive were desired, Congress could amend § 204(a) of the 1972 FWPCA, 33 U.S.C. § 1284(a) (Supp. V 1975), to require that a project be included in a regional growth plan in order to be eligible for a construction grant. The availability of Title II assistance would thereby be contingent upon the existence of an adopted regional growth plan.

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under the proposed amendment may induce some regional councils currently without plans to undertake growth planning.

A more telling criticism is that the amendments would retain Title II's functional structure. Since the Administrator would still be responsible for ensuring that an individual treatment project or a § 208 plan is compatible with adopted regional growth plans, the potential for, and likelihood of, functionally oriented decisionmaking would still exist. For example, the Administrator might interpret plans in such a way that sewer projects with potentially adverse growth impacts meet the compatibility requirement.¹⁸¹

B. *Regional Water Pollution Abatement*

1. *The Proposal*

It is apparent that a common difficulty with all of the proposals outlined above is that they retain the 1972 FWPCA's functional approach. It may therefore be preferable to replace Title II altogether with a comprehensive program that would permit sewers to be designed in a manner consistent with local development objectives to the maximum extent possible. This could best be achieved by a total overhaul of the construction grants program: Title II funding should be awarded to regional comprehensive planning agencies (CPAs) that have established pollution abatement programs both compatible with the requirements of the 1972 FWPCA and governed by a duly adopted regional growth plan.¹⁸² Instead of awarding construction grants to

181. The Governor's certification power under the proposed amendment to § 208(b)(3) might check this possibility.

In its Winnepesaukee EIS the EPA concluded that the proposed regional treatment works project was consistent with the regional planning commission's land-use objectives, Winnepesaukee EIS, *supra* note 27, at IV-48, despite the commission's conclusion to the contrary, *id.* at app. M (letter to Wallace E. Stickney, Director, Environmental Impact Office, from Laurence B. Flint, Chairman, Lakes Region Planning Comm'n).

An amendment to the Federal-Aid Highway Act requiring that federally assisted highways be consistent with metropolitan comprehensive transportation plans, 23 U.S.C. § 134 (1970), proved ineffective at realizing greater coordination of highways and growth objectives in large metropolitan areas, although it was somewhat more successful in smaller urban areas. See M. LEVIN & N. ABEND, BUREAUCRATS IN COLLISION: CASE STUDIES IN AREA TRANSPORTATION PLANNING 3-6 (1971).

182. Since the objective of the proposed regional pollution abatement program is to avoid the bifurcation of planning into functional and comprehensive components, it is essential that adequate comprehensive planning of development take place. The suggested requirement creates a strong incentive for the preparation and adoption of a regional growth plan. While it may be argued that provision should be made for pollution abatement in regions in which CPAs do not prepare and adopt plans, it is suggested that Title II assistance not be available in such regions in order to ensure that the proposal will create an adequate incentive for planning waste treatment systems comprehensively.

individual *projects*, the EPA would make annual grants to qualifying *programs*.¹⁸³

The identification of regional CPAs to administer the proposed scheme is obviously important. Such agencies would have to be competent both to implement the water quality goals of the 1972 FWPCA and to undertake growth planning. Moreover, to expedite transition to the new program and to prevent the establishment of a new layer of bureaucracy, a regional pollution abatement program should use existing regional organizations wherever possible. An ideal CPA would be a representative organization¹⁸⁴ that is receiving 701 funding and serves as an A-95 clearinghouse.¹⁸⁵ As has been noted, such agencies have been established in most areas.¹⁸⁶

The immediate appeal of the proposed program is its utilization of

The federal authorization for the regional pollution abatement program should be the same as under the present scheme, and the EPA Administrator should continue to allot funds among states according to their abatement needs. *See* 33 U.S.C. §§ 1285(a), 1375(b)(1) (Supp. V 1975). However, instead of ranking individual treatment works projects on a priority list, state water pollution control agencies should allocate their federal funds regionally according to pollution abatement needs. Once regional shares are determined and a grant is awarded by the EPA, further allocation of the funds would be the responsibility of the CPA grantee.

183. Given the EPA's limited manpower, *see* N.Y. Times, Jan. 23, 1977, § 1, at 16, col. 1 (EPA has staff of 9,550 to administer all programs, including nearly 8,000 treatment works projects currently under design or in construction), the agency might implement more efficiently the 1972 FWPCA's policy of assisting the construction of publicly owned treatment works by reviewing regional pollution abatement programs, rather than individual projects, for compatibility with the Act's requirements.

This concept of replacing individual project grants with direct funding of nonfederal programs is not unprecedented. The Housing and Community Development Act of 1974, Pub. L. No. 93-383, 88 Stat. 633 (codified in scattered sections of 5, 12, 20, 31, 40, 42, 49 U.S.C.), consolidated 10 categorical grant programs into a single "block grant" and gave local officials principal responsibility for determining community development needs, establishing priorities, and allocating resources. *See* 42 U.S.C. §§ 5301-5317 (Supp. V 1975); H.R. REP. No. 1114, 93d Cong., 2d Sess. 3 (1974). Community applicants are required to prepare three-year-plan summaries describing proposed activities and expenditures and to certify further that the Act's overall housing and development objectives are being met. *See* 42 U.S.C. § 5304(a) (Supp. V 1975). The Law Enforcement Assistance Administration also reviews overall programs, although its program grants are made to states rather than to municipalities. *See id.* §§ 3722, 3723, 3733, 3736.

184. Whether representation should be apportioned according to a municipality's share of regional population is an issue best left to the region. However desirable it might be to require representation based on the one man—one vote principle, the practicability of such representation is open to dispute, as evidenced by the existing preference of regional councils for representation based on one unit of government—one vote. *See* note 151 *supra*.

185. In choosing 701-funded CPAs, the EPA Administrator would be assured of the regional grantee's competence as a growth planner, since a condition of 701 assistance is the preparation of a comprehensive plan with a land-use element. *See* p. 766 *supra*. By selecting an A-95 clearinghouse, the Administrator would fund waste treatment planning by an agency in a position to comment on other federal development projects that might not be consistent with the CPA's adopted growth plan. *See* pp. 754-55 *supra*.

186. *See* pp. 765-66 *supra*.

regional comprehensive planning. Such planning can blunt the functionalism of the present Act as administered: it can most effectively minimize adverse and maximize beneficial growth impacts.¹⁸⁷ Direct funding of CPAs would help to eliminate the reactive nature of the present Title II scheme. Applicants, through control of sewer design, could actively use a pollution abatement program as a growth-guidance mechanism. Moreover, by decentralizing the administration of Title II, the proposal places full responsibility for treatment works design in the hands of planners and officials who are closer to the localities most directly affected by sewer-induced growth impacts.

The proposal also surmounts a major shortcoming of the existing construction grants program: inadequate local planning. CPAs operate with full-time professional staffs¹⁸⁸ whose business it is to be aware of, and plan for, growth impacts of functional programs. Hence, harmful overdesigning of waste treatment projects is less likely, and considered choices to provide excess capacity in areas planned for growth are more likely.¹⁸⁹

The program outlined here would admittedly constitute a significant shift in the federal approach to water pollution abatement. But this shift is not unprecedented. In Toronto, Canada, a Royal Commission found that regional planning and control of sewerage facilities

187. See pp. 760-63 *supra*.

188. See REGIONAL DECISION MAKING, *supra* note 111, at 92.

An important feature of the regional pollution abatement proposal is its funding of programs instead of projects. Waste treatment planning and construction would be an ongoing process. Moreover, depending on the pollution abatement need of the region, see note 182 *supra*, the annual grant could include funding for several projects. Therefore, most programs are likely to have the continuity and scale needed to hire their own staff and thus would not be as dependent on consulting engineers or as susceptible to pressure from developers. See note 59 *supra*.

Funding for CPA planning and operations could be provided without diminishing congressional authorizations for construction grants. First, since § 208 would be repealed, the funds for waste treatment management planning could be allocated to regional CPAs. See 33 U.S.C. § 1288(f)(3) (Supp. V 1975) (appropriating \$300 million for § 208 funding over three years). Moreover, 701 assistance would continue to be available for land-use planning by CPAs. See 40 U.S.C.A. § 461(c) (West Dec. 1976 Pamphlet) (appropriating \$100 million in fiscal year 1977 for comprehensive planning assistance).

189. It may be objected that the proposed program would enable localities to build vastly oversized treatment works projects in pursuit of implausible growth objectives, since the EPA would no longer review an applicant-locality's estimate of reserve capacity based on population projections. Nonetheless, the proposed program would continue to constrain the funding of oversized waste treatment facilities. Its fiscal limitations would require the CPA to make prudent decisions as to the allocation of reserve capacity. See note 182 *supra*. In addition, such determinations would be made pursuant to the region's growth plan; hence, the allocation of reserve capacity would be governed by the growth objectives established by mutual agreement in a representative planning process. Within these limits, a region would have the option of consciously overdesigning sewers to stimulate development in areas planned for growth.

produced orderly development patterns in sharp contrast to patterns prevailing before regionalization.¹⁹⁰ Similarly, establishment in 1967 of the Metropolitan Council in St. Paul and Minneapolis, Minnesota¹⁹¹ was motivated in part by the need for coordination of sewer construction with regional growth planning.¹⁹² Special legislation provided for creation of the Council, whose members are appointed by the Governor.¹⁹³ The Council serves as the metropolitan A-95 clearinghouse and is responsible for preparation of the Metropolitan Development Guide.¹⁹⁴ More importantly, the Council appoints the members of the Metropolitan Waste Control Commission and prepares long-range policy plans under which the Commission operates.¹⁹⁵ It also approves the Commission's budget and development program.¹⁹⁶ Hence, the Metropolitan Council has many of the characteristics of the regional CPA.¹⁹⁷

For the most part, however, regional comprehensive planning remains untried. The merits of comprehensive planning have been discussed for at least two decades;¹⁹⁸ Congress has funded CPAs and required that they develop comprehensive plans with land-use elements. But CPAs have seldom been given the opportunity to implement local growth objectives.¹⁹⁹ Title II appears to be a particularly appropriate program with which to test the ability of a CPA. As then EPA Administrator Russell Train observed:

190. See REPORT OF THE ROYAL COMMISSION ON METROPOLITAN TORONTO 166-67 (1965).

191. Metropolitan Council Act, 1967 Minn. Laws, ch. 896, §§ 1-8 (current version at MINN. STAT. ANN. §§ 473.121-.871 (West Supp. 1976)).

192. S. BALDINGER, PLANNING AND GOVERNING THE METROPOLIS 77-89 (1971).

193. MINN. STAT. ANN. § 473.123 (West Supp. 1976).

194. *Id.* § 473.135; see REGIONAL DECISION MAKING, *supra* note 111, at 4-5.

195. MINN. STAT. ANN. §§ 473.121 subd. 7, .141 subd. 2, .146 subd. 1 (West Supp. 1976).

196. *Id.* §§ 473.161, .163.

197. The Metropolitan Council also has varying degrees of control over metropolitan and regional agencies. It prepares policy plans for, and reviews the budget and development program of, the transit commission. *Id.* §§ 473.121 subd. 7, .146, .161, .163. It further reviews all capital projects of the airport commission in excess of \$2 million; and "[n]o such project which has a significant effect on the orderly and economic development of the metropolitan area may be commenced" without its approval. *Id.* § 473.621 subd. 6.

The Council appears to be using its powers actively to guide growth in the Twin Cities region. See Freilich & Ragsdale, *supra* note 142, at 1018-22. It is not surprising that such activism, reinforced by planning powers substantially greater than those proposed for CPAs in this Note, has both admirers and opponents. See N.Y. Times, Mar. 8, 1977, at 1, col. 1.

198. See Haar, *supra* note 132.

199. See REGIONAL DECISION MAKING, *supra* note 111, at 109; ROCKEFELLER BROTHERS FUND, THE USE OF LAND 238 (1973); 1 Interceptor Sewers, *supra* note 26, at 60; Valley Forge EIS, *supra* note 27, at III-32.

Our ability to make intelligent choices for the future is constrained by our continued refusal or inability to establish . . . a mechanism for comprehensive long-range planning. We continue to view planning as synonymous with government intervention in decisions better left to private enterprise This strikes me as dangerous thinking in today's interdependent world. We clearly need a process, even an imperfect one, for identifying and assessing our choices for the future.²⁰⁰

2. *Potential Problems with Regional Pollution Abatement*

Several objections may be raised concerning the proposal that CPAs implement a national water pollution abatement program. At the outset, it must be admitted that granting funds to a regional body to plan sewers for several municipalities may run counter to traditional values associated with local autonomy²⁰¹—particularly since the localities may be held liable for water pollution not abated. However, regionalization offers localities efficiencies in planning and implementation.²⁰² Furthermore, the 1972 FWPCA already forces some degree of regional planning: where § 208 regions are designated, municipal applicants must plan waste treatment facilities consistent with an areawide plan.²⁰³ Finally, it is the municipalities themselves that will constitute the CPA's governing board. Hence, they will not, as a group, lose control over the means to abate pollution and avoid fines.

A more serious difficulty arises to the extent that a majority of municipalities can control a CPA and systematically override the objectives of a member municipality. But the fear of majority domination may be exaggerated. The regional planning case studies discussed above evince no instance of such domination. Since regions often include municipalities with differing growth objectives,²⁰⁴ competition

200. Train, *supra* note 82, at 284-85.

201. See, e.g., 1975 Hearings, *supra* note 9, at 117 (Rep. Clauson) (§ 208 agencies may in effect superimpose another level of regional government rather than cultivate agreement among § 208 area's municipalities).

202. See p. 764 *supra*.

203. See 33 U.S.C. § 1284(a)(1) (Supp. V 1975).

204. See Winnepesaukee EIS, *supra* note 27, at III-8 to III-9 (region's municipal comprehensive plans indicated that eight areas had been identified for high-density residential uses, Lake Winnepesaukee shoreline generally had been planned for medium-density uses, and much of remaining area had been planned for low-density residential uses). Cooperation appears possible under such circumstances since not all communities will be competing for reserve capacity with which to develop. See Valley Forge EIS, *supra* note 27, at III-34 to III-39, III-41 (suggesting different levels of commitment to development among eight townships).

for scarce pollution abatement dollars and new development may seldom occur.

To assess the risk that CPA majoritarianism poses to local autonomy, it is helpful to consider potential clashes between the CPA and a municipality. First, the CPA could refuse to fund a sewer project required by a municipality to achieve compliance with the 1972 FWPCA's deadlines. In practice this would be unlikely. Failure to fund such projects would mean that the regional program would not be compatible with the 1972 FWPCA and hence not eligible for funding under the program proposed here. A resident of the municipality could therefore bring an action against the EPA Administrator to prevent him from approving further grants to the CPA.²⁰⁵

A second conflict might occur if a regional CPA funded sufficient waste treatment capacity to enable a municipality to comply with the Act but did not fund all of the treatment capacity requested. In this situation, a municipality would have to fund the full cost of providing reserve capacity to accommodate planned future growth. It would thus have a strong financial incentive not to grow regardless of its development objectives. The regional pollution abatement program, however, would not prevent the locality from building its own sewers in order to accommodate growth.²⁰⁶ Even under the present construction grants program, local applicants may not receive funding for all of the sewage treatment capacity requested.

Finally, it could be argued that majority domination might result in a CPA planning treatment works projects that would stimulate more growth than a minority municipality desired. But it would be difficult, if not impossible, to build a treatment works project without a locality's cooperation. Under the proposal advanced here, the regional CPA would not have the power to condemn land or operate treatment facilities.²⁰⁷ Nor could it tax municipal residents or require

205. 33 U.S.C. § 1365(a)(2) (Supp. V 1975).

206. Of course, a municipality that chooses to construct its own system would forgo the substantial federal assistance proffered by the regional program. Although the expense would be great, it would not be an insurmountable barrier for a locality. In some areas developers may be willing to bear some of the cost of waste treatment. See 2 Interceptor Sewers, *supra* note 26, at 70 (Ocean County, N.J.), 113 (North Fulton County, Ga.), 153 (DeSoto County, Miss.; Shelby County, Tenn.).

Furthermore, a locality may be eligible for assistance under other federal programs such as the Consolidated Farmers Home Administration Act of 1961, 7 U.S.C. § 1926 (1970 & Supp. V 1975), and the Public Works and Economic Development Act Amendments of 1971, 42 U.S.C.A. § 3131 (West 1973 & Dec. 1976 Pamphlet).

207. CPAs would receive grants only for the planning, administration, and implementation of regional pollution abatement programs. It is not envisioned that the CPA would assume any of the local powers traditionally held by municipalities. Of course, it is possible that CPAs might be given control of the budget of intermunicipal waste

individual users to make payments to the CPA. It therefore seems reasonable to conclude that the consequences for individual municipalities of bloc domination of CPAs are not likely to be significant.

A second area of concern would be the extent to which decentralized administration of a national water pollution abatement program could be controlled. Arguably, a CPA might use grants to fund sewer construction that furthered regional objectives at the expense of national water quality goals. However, control of the program could be ensured within the existing structure of the 1972 FWPCA. At the outset, the EPA Administrator could refuse to approve grant applications that are not compatible with the Act's objective. If a program initially received a grant but subsequently failed to meet its pollution abatement obligations, the Administrator could refuse to approve further annual grants.²⁰⁸ Moreover, if a CPA failed to implement the Act's interim deadlines for the achievement of effluent limitations,²⁰⁹ individual and municipal polluters would be in violation of the 1972 FWPCA and subject to substantial civil penalties.²¹⁰ They would undoubtedly put pressure on the CPA through their representatives on the board.

A more serious concern may be the flexibility this proposal would leave a CPA, given the requirement that its plan be compatible with the 1972 FWPCA's deadlines. It is conceivable that if deadlines are enforced, the CPA would be compelled to design the same treatment works projects being funded under the present program. It appears, however, that the CPA will have considerable flexibility in planning water pollution abatement. For example, in some of the treatment works projects funded under the present scheme, different configurations of STPs and interceptors were considered that were not significantly more expensive than the configuration ultimately recommended. In the Lake Winnepesaukee region of New Hampshire, the capital construction cost of building a system involving eight STPs was less than the cost of the recommended one-STP project.²¹¹ In

treatment districts as well as authority to make appointments to the boards of such special districts. *See, e.g.*, p. 776 *supra*. The creation of special, intermunicipal districts is normally the responsibility of state legislatures. *See generally* REGIONAL DECISION MAKING, *supra* note 111, at 19-47.

208. Even if the Administrator approved a program application that did not further pollution abatement objectives, citizens would have standing under the 1972 FWPCA to seek judicial review of such nondiscretionary decisions. 33 U.S.C. § 1365(a)(2) (Supp. V 1975).

209. *See id.* § 1311(b).

210. *See id.* § 1319(d).

211. *See* Winnepesaukee EIS, *supra* note 27, at V-1 to V-5. The eight-STP alternative was ruled out because of state restrictions on the discharge of treated effluent into lakes.

Scarborough, Maine, the capital cost of constructing two STPs was less than the cost of the recommended single-plant system.²¹² If residents of Scarborough or the Winnepesaukee region had preferred to accommodate population in separate growth centers rather than in interceptor-lined corridors, such a pattern could have been partially induced without added expenditure of Title II resources by construction of smaller STPs in planned growth centers. Hence, adjustment of a project's STP and interceptor configuration affords planners at least one degree of freedom in the administration of a regional pollution abatement program.²¹³

The CPA's flexibility would be enhanced to the extent that it could realize savings. A regional agency could achieve economies of scale in the planning and operation of a waste treatment management system.²¹⁴ The CPA would also have flexibility in the allocation of reserve capacity: the savings realized by not building reserve capacity in an area not planned for growth could help to finance a system with excess capacity in an area planned to grow.

Finally, flexibility might occur through the postponement of the 1972 FWPCA's deadlines. It has been recognized that the Act's goals are overly ambitious; in the last Congress an amendment was introduced that would have postponed one of the Act's deadlines for publicly owned treatment works.²¹⁵ Such an amendment has merit. Aside from being unrealistic, the Act's goals and deadlines serve to support functionalism in the administration of the 1972 FWPCA. For the regional CPA, postponement of the goals would relax functional

212. Scarborough EIS, *supra* note 27, at III-3. For other examples, see Grand Strand EIS, *supra* note 32, at 4-52 (capital cost of constructing two-STP alternative was less than that of single-STP alternative); and Greeley EIS, *supra* note 47, at 77, 87, 99 (capital cost of constructing five-STP alternative was 20% less than that of recommended, single-STP alternative; former alternative was not recommended because technology was untested in United States). Operating and maintenance costs, which are not eligible for Title II assistance, may be higher for waste treatment systems employing multiple STPs rather than a central plant. See p. 764 & note 145 *supra*.

213. Other means to achieve savings exist. See Grand Strand EIS, *supra* note 32, at 4-4 to 4-6 (alternatives to proposed project include educational programs to promote water conservation and the installation of water conservation devices); Lincoln County EIS, *supra* note 24, at 80-81 (alternative to proposed project would be system of septic-tank pumping and inspections by sanitary engineers).

214. See p. 764 *supra*.

215. See H.R. 3199, 95th Cong., 1st Sess. § 13 (1977). The National Commission on Water Quality has proposed that the 1972 FWPCA's 1985 goal be revised. See note 10 *supra*. Although the EPA Administrator has estimated that \$95.9 billion will be needed to achieve the 1983 deadline, see note 11 *supra*, the annual authorization for treatment works construction has averaged only \$6 billion, 33 U.S.C. § 1287 (Supp. V 1975). But see note 216 *infra*. Without higher authorizations, it is inconceivable that the Nation's waters will be "fishable and swimmable" by 1983. The goals also have been criticized as being simplistic and inefficient. See ACKERMAN, *supra* note 130, at 319-28.

constraints and enhance flexibility. It would permit the reordering of treatment works priorities to reflect comprehensive objectives. The delay would result in a more sensible balance between clean water and other environmental objectives.

C. Implementation

The recognition that the Act's deadlines will have to be revised suggests that it is not too late to rethink the construction grants program. The substantial transformation of Title II proposed here counsels a deliberate transitional strategy. An appropriate scheme might be (1) to push back the 1972 FWPCA's deadlines,²¹⁶ (2) to adopt the proposed amendment to Title II requiring compatibility between construction grants and regional growth plans, and (3) gradually to implement the proposed regional pollution abatement programs.

This strategy has the advantage of continuing the present construction grants effort during the transition to comprehensive regional programs. Moreover, gradual implementation would make possible a comparison of the alternatives outlined here, while the proposed amendment would serve as a stopgap measure to facilitate the shift to comprehensiveness in the planning of waste treatment systems. This scheme would concededly slow the national effort to abate water pollution. But this seems a tolerable price to pay for the opportunity of utilizing regional comprehensive planning of sewers to reduce the costs of unplanned growth and to mold development patterns in a manner consistent with local aspirations.

216. The EPA has proposed amendments to the 1972 FWPCA that, by not funding some of the facilities currently eligible for assistance, would reduce the federal share of needed treatment works construction to \$45-\$55 billion over the next 10 years. See *Transition Papers*, *supra* note 11, at 1288, 1309. At the same time, EPA Deputy Administrator John Quarles has indicated his opposition to the deadline postponement recommended by the National Commission on Water Quality, see note 10 *supra*, on the grounds that "it would undermine the entire national effort to control water pollution" and "blunt the momentum of everything we are doing today to restore clean water to the American people." Quarles, *National Water Quality: Assessing the Mid-course Correction*, SIERRA CLUB BULL., Feb. 1977, at 14, 17. It is unclear from these recent reports and statements what relationship, if any, exists between these estimates of treatment works needs and the 1972 FWPCA's pollution abatement schedule, or whether the import of the Act's specific deadlines is perceived to be anything more than exhortatory.